

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with [30 TAC 213](#).

Administrative Review

1. [Edwards Aquifer applications](#) must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: <http://www.tceq.texas.gov/field/eapp>.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.
3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.
4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.
6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.
2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name:					2. Regulated Entity No.:				
3. Customer Name:					4. Customer No.:				
5. Project Type: (Please circle/check one)	New	Modification			Extension		Exception		
6. Plan Type: (Please circle/check one)	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residential	Non-residential				8. Site (acres):			
9. Application Fee:			10. Permanent BMP(s):						
11. SCS (Linear Ft.):			12. AST/UST (No. Tanks):						
13. County:			14. Watershed:						

Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the “Texas Groundwater Conservation Districts within the EAPP Boundaries” map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	Hays	Travis	Williamson
Original (1 req.)	—	—	—
Region (1 req.)	—	—	—
County(ies)	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)	—	—	—	—	—
Region (1 req.)	—	—	—	—	—
County(ies)	—	—	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Trinity-Glen Rose	<input type="checkbox"/> Edwards Aquifer Authority	<input type="checkbox"/> Kinney	<input type="checkbox"/> EAA <input type="checkbox"/> Medina	<input type="checkbox"/> EAA <input type="checkbox"/> Uvalde
City(ies) Jurisdiction	<input type="checkbox"/> Castle Hills <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Helotes <input type="checkbox"/> Hill Country Village <input type="checkbox"/> Hollywood Park <input type="checkbox"/> San Antonio (SAWS) <input type="checkbox"/> Shavano Park	<input type="checkbox"/> Bulverde <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Garden Ridge <input type="checkbox"/> New Braunfels <input type="checkbox"/> Schertz	NA	<input type="checkbox"/> San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.

RYAN WHITTLE

Print Name of Customer/Authorized Agent

Ryan Whittle

3/19/19

Signature of Customer/Authorized Agent

Date

FOR TCEQ INTERNAL USE ONLY			
Date(s) Reviewed:		Date Administratively Complete:	
Received From:		Correct Number of Copies:	
Received By:		Distribution Date:	
EAPP File Number:		Complex:	
Admin. Review(s) (No.):		No. AR Rounds:	
Delinquent Fees (Y/N):		Review Time Spent:	
Lat./Long. Verified:		SOS Customer Verification:	
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):
Core Data Form Complete (Y/N):			Signed (Y/N):
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):

CONTRIBUTING ZONE PLAN APPLICATION

Contributing Zone Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Contributing Zone to the Edwards Aquifer and Relating to 30 TAC §213.24(1), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Contributing Zone Plan Application** is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Customer/Agent: Stantec c/o Ryan Whittle, P.E.

Date: 3/19/19

Signature of Customer/Agent:

Ryan Whittle

Regulated Entity Name: +/- 48-acre Sonoma Verde Multi Family Tract

Project Information

1. County: Bexar
2. Stream Basin: Leon Creek Watershed
3. Groundwater Conservation District (if applicable): Trinity Glen Rose and Edward's Aquifer Authority
4. Customer (Applicant):

Contact Person: Bill Watts

Entity: 2i Sonoma Verde, L.P.

Mailing Address: 10140 Tisbury Drive

City, State: Frisco, TX

Telephone: (972) 712-5606

Email Address: bill@mrcteam.com

Zip: 75035

Fax: N/A

5. Agent/Representative (If any):

Contact Person: _____

Entity: _____

Mailing Address: _____

City, State: _____

Zip: _____

Telephone: _____

Fax: _____

Email Address: _____

6. Project Location:

- ☐ The project site is located inside the city limits of _____.
- ☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
- ☐ The project site is not located within any city's limits or ETJ.

7. ☐ The location of the project site is described below. Sufficient detail and clarity has been provided so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

8. ☐ **Attachment A - Road Map.** A road map showing directions to and the location of the project site is attached. The map clearly shows the boundary of the project site.

9. ☐ **Attachment B - USGS Quadrangle Map.** A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000") is attached. The map(s) clearly show:

- ☐ Project site boundaries.
- ☐ USGS Quadrangle Name(s).

10. ☐ **Attachment C - Project Narrative.** A detailed narrative description of the proposed project is attached. The project description is consistent throughout the application and contains, at a minimum, the following details:

- ☐ Area of the site
- ☐ Offsite areas
- ☐ Impervious cover
- ☐ Permanent BMP(s)
- ☐ Proposed site use
- ☐ Site history
- ☐ Previous development
- ☐ Area(s) to be demolished

11. Existing project site conditions are noted below:

- ☐ Existing commercial site
- ☐ Existing industrial site
- ☐ Existing residential site


- ☐ Existing paved and/or unpaved roads
☐ Undeveloped (Cleared)
☐ Undeveloped (Undisturbed/Not cleared)
☐ Other: _____

12. The type of project is:

- ☐ Residential: # of Lots: _____
☐ Residential: # of Living Unit Equivalents: _____
☐ Commercial
☐ Industrial
☐ Other: _____

13. Total project area (size of site): _____ Acres

Total disturbed area: _____ Acres

14. Estimated projected population: _____ 

15. The amount and type of impervious cover expected after construction is complete is shown below:

Table 1 - Impervious Cover

<i>Impervious Cover of Proposed Project</i>	<i>Sq. Ft.</i>	<i>Sq. Ft./Acre</i>	<i>Acres</i>
Structures/Rooftops		÷ 43,560 =	
Parking		÷ 43,560 =	
Other paved surfaces		÷ 43,560 =	
Total Impervious Cover		÷ 43,560 =	

Total Impervious Cover _____ ÷ Total Acreage _____ X 100 = _____% Impervious Cover

16. ☐ **Attachment D - Factors Affecting Surface Water Quality.** A detailed description of all factors that could affect surface water quality is attached. If applicable, this includes the location and description of any discharge associated with industrial activity other than construction.

17. ☐ Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

For Road Projects Only

Complete questions 18 - 23 if this application is exclusively for a road project.

☐ N/A

18. Type of project:

- ☐ TXDOT road project.
- ☐ County road or roads built to county specifications.
- ☐ City thoroughfare or roads to be dedicated to a municipality.
- ☐ Street or road providing access to private driveways.

19. Type of pavement or road surface to be used:

- ☐ Concrete
- ☐ Asphaltic concrete pavement
- ☐ Other: _____

20. Right of Way (R.O.W.):

Length of R.O.W.: _____ feet.

Width of R.O.W.: _____ feet.

$L \times W = \text{_____ Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} = \text{_____ acres.}$

21. Pavement Area:

Length of pavement area: _____ feet.

Width of pavement area: _____ feet.

$L \times W = \text{_____ Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} = \text{_____ acres.}$

Pavement area _____ acres \div R.O.W. area _____ acres $\times 100 = \text{_____ \%}$ impervious cover.

22. ☐ A rest stop will be included in this project.

☐ A rest stop will not be included in this project.

23. ☐ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

Stormwater to be generated by the Proposed Project

24. ☐ **Attachment E - Volume and Character of Stormwater.** A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

Wastewater to be generated by the Proposed Project

25. ☐ Wastewater is to be discharged in the contributing zone. Requirements under 30 TAC §213.6(c) relating to Wastewater Treatment and Disposal Systems have been satisfied.

☐ N/A

26. Wastewater will be disposed of by:

☐ On-Site Sewage Facility (OSSF/Septic Tank):

☐ **Attachment F - Suitability Letter from Authorized Agent.** An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☐ Sewage Collection System (Sewer Lines):

The sewage collection system will convey the wastewater to the _____ Treatment Plant. The treatment facility is:

☐ Existing.

☐ Proposed.

☐ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

Complete questions 27 - 33 if this project includes the installation of AST(s) with volume(s) greater than or equal to 500 gallons.

☐ N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

<i>AST Number</i>	<i>Size (Gallons)</i>	<i>Substance to be Stored</i>	<i>Tank Material</i>
1			
2			
3			
4			
5			

Total x 1.5 = _____ Gallons

28. ☐ The AST will be placed within a containment structure that is sized to capture one and one-half (1 1/2) times the storage capacity of the system. For facilities with more than

5 of 11

one tank system, the containment structure is sized to capture one and one-half (1 1/2) times the cumulative storage capacity of all systems.

- ☐ **Attachment G - Alternative Secondary Containment Methods.** Alternative methods for providing secondary containment are proposed. Specifications showing equivalent protection for the Edwards Aquifer are attached.

29. Inside dimensions and capacity of containment structure(s):

Table 3 - Secondary Containment

<i>Length (L)(Ft.)</i>	<i>Width(W)(Ft.)</i>	<i>Height (H)(Ft.)</i>	<i>L x W x H = (Ft3)</i>	<i>Gallons</i>

Total: _____ Gallons

30. Piping:

- ☐ All piping, hoses, and dispensers will be located inside the containment structure.
- ☐ Some of the piping to dispensers or equipment will extend outside the containment structure.
- ☐ The piping will be aboveground
- ☐ The piping will be underground

31. ☐ The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of: _____.

32. ☐ **Attachment H - AST Containment Structure Drawings.** A scaled drawing of the containment structure is attached that shows the following:

- ☐ Interior dimensions (length, width, depth and wall and floor thickness).
- ☐ Internal drainage to a point convenient for the collection of any spillage.
- ☐ Tanks clearly labeled
- ☐ Piping clearly labeled
- ☐ Dispenser clearly labeled

33. ☐ Any spills must be directed to a point convenient for collection and recovery. Spills from storage tank facilities must be removed from the controlled drainage area for disposal within 24 hours of the spill.

- ☐ In the event of a spill, any spillage will be removed from the containment structure within 24 hours of the spill and disposed of properly.

- ☐ In the event of a spill, any spillage will be drained from the containment structure through a drain and valve within 24 hours of the spill and disposed of properly. The drain and valve system are shown in detail on the scaled drawing.

Site Plan Requirements

Items 34 - 46 must be included on the Site Plan.

34. ☐ The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = ____'.
35. 100-year floodplain boundaries:
- ☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
- ☐ No part of the project site is located within the 100-year floodplain.
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): ____.
36. ☐ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.
- ☐ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot contour intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.
37. ☐ A drainage plan showing all paths of drainage from the site to surface streams.
38. ☐ The drainage patterns and approximate slopes anticipated after major grading activities.
39. ☐ Areas of soil disturbance and areas which will not be disturbed.
40. ☐ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
41. ☐ Locations where soil stabilization practices are expected to occur.
42. ☐ Surface waters (including wetlands).
☐ N/A
43. ☐ Locations where stormwater discharges to surface water.
☐ There will be no discharges to surface water.
44. ☐ Temporary aboveground storage tank facilities.
☐ Temporary aboveground storage tank facilities will not be located on this site.

45. ☐ Permanent aboveground storage tank facilities.
☐ Permanent aboveground storage tank facilities will not be located on this site.
46. ☐ Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

Practices and measures that will be used during and after construction is completed.

47. ☐ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.
☐ N/A
48. ☐ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.
☐ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.
☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____.
☐ N/A
49. ☐ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.
☐ N/A
50. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.
☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
☐ The site will not be used for low density single-family residential development.

51. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

- ☐ **Attachment I - 20% or Less Impervious Cover Waiver.** The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
- ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
- ☐ The site will not be used for multi-family residential developments, schools, or small business sites.

52. ☐ **Attachment J - BMPs for Upgradient Stormwater.**

- ☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
- ☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
- ☐ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

53. ☐ **Attachment K - BMPs for On-site Stormwater.**

- ☐ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.
- ☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

54. ☐ **Attachment L - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams is attached.

☐ N/A

55. ☐ **Attachment M - Construction Plans.** Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. Construction plans for the proposed permanent BMPs and measures are

attached and include: Design calculations, TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

☐ N/A

56. ☐ **Attachment N - Inspection, Maintenance, Repair and Retrofit Plan.** A site and BMP specific plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan fulfills all of the following:

- ☐ Prepared and certified by the engineer designing the permanent BMPs and measures
- ☐ Signed by the owner or responsible party
- ☐ Outlines specific procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofit.
- ☐ Contains a discussion of record keeping procedures

☐ N/A

57. ☐ **Attachment O - Pilot-Scale Field Testing Plan.** Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

☐ N/A

58. ☐ **Attachment P - Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that result in water quality degradation.

☐ N/A

Responsibility for Maintenance of Permanent BMPs and Measures after Construction is Complete.

59. ☐ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
60. ☐ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development,

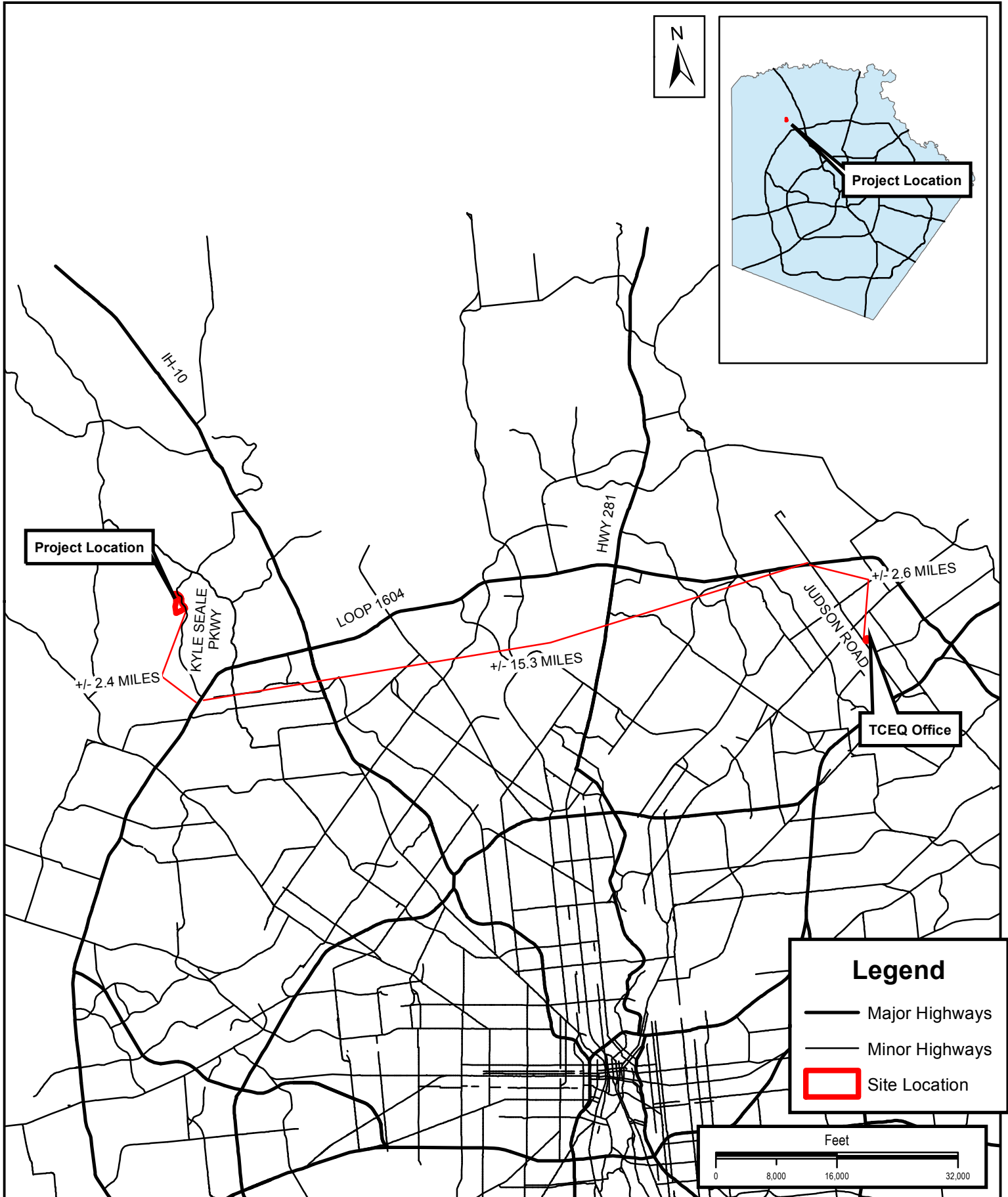
or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

Administrative Information

61. ☐ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.
62. ☐ Any modification of this Contributing Zone Plan may require TCEQ review and Executive Director approval prior to construction, and may require submission of a revised application, with appropriate fees.
63. ☐ The site description, controls, maintenance, and inspection requirements for the storm water pollution prevention plan (SWPPP) developed under the EPA NPDES general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) of the technical report. All requirements of 30 TAC §213.24(1-5) have been met by the SWPPP document.
- ☐ The Temporary Stormwater Section (TCEQ-0602) is included with the application.

ATTACHMENT A

ROAD MAP



70 NE Loop 410, Suite 1100
San Antonio, Texas 78216
(210) 525-9090, Phone

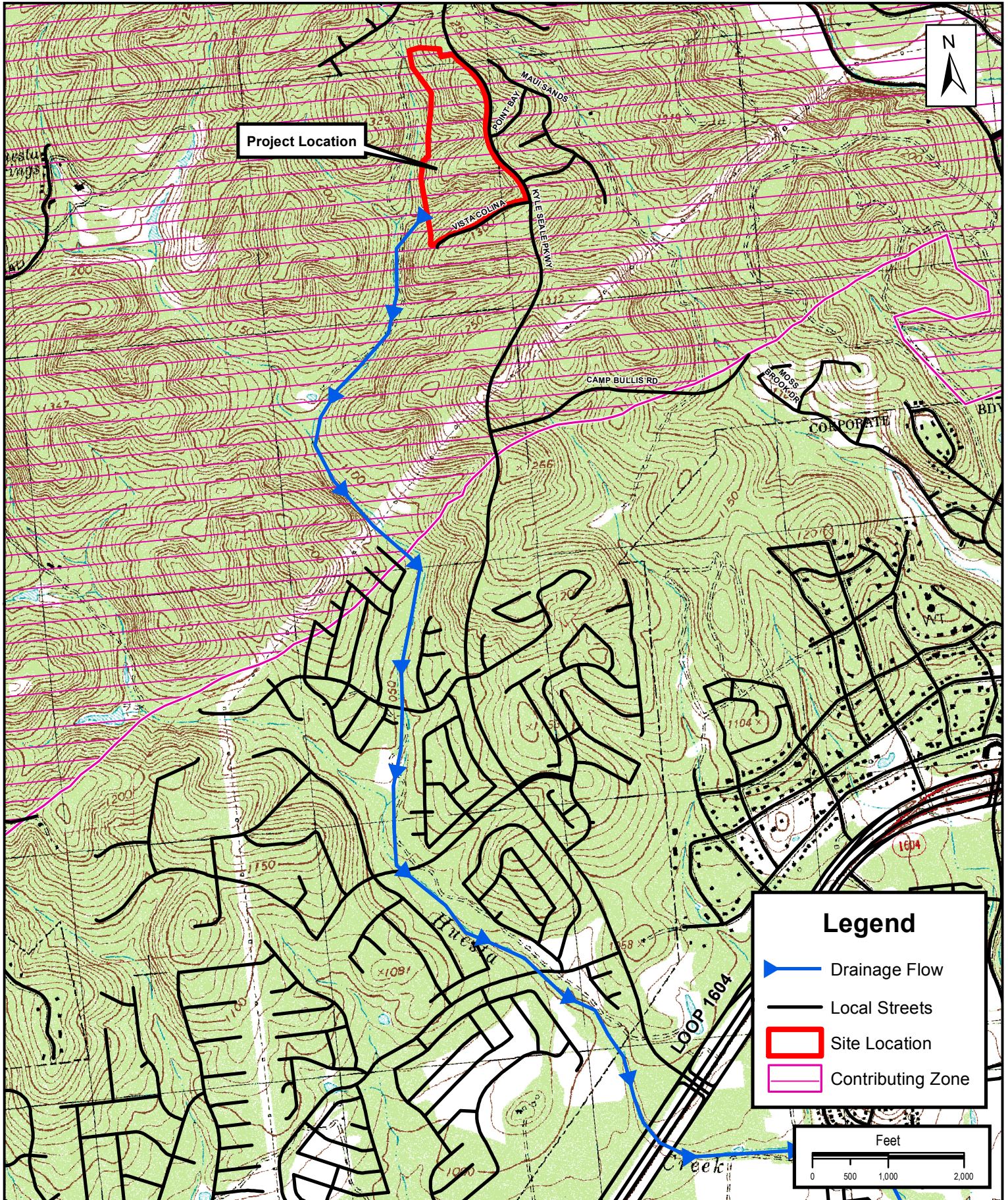
TBPE #6324
Copyright © 2019
www.stantec.com

Appendix 1 Road Map

Date: 2/18/2019
File: Road Map Exhibit.mxd
Scale: 1 : 200,000
Tech: JDW
Project Number: 222011489

ATTACHMENT B

USGS/EDWARDS RECHARGE ZONE MAP
(Scale 1" = 2,000')



70 NE Loop 410, Suite 1100
San Antonio, Texas 78216
(210) 525-9090, Phone

TBPE #6324
Copyright © 2019
www.stantec.com

Appendix 1 USGS Quadrangle Map

Date: 2/18/2019
File: USGS Exhibit.mxd
Scale: 1 : 20,000
Tech: JDW
Project Number: 222011489

ATTACHMENT C
PROJECT NARRATIVE

Attachment C – Project Narrative

PROJECT DESCRIPTION

The Sonoma Verde development is a 48.4-acre non-residential multifamily development located northwest of the Kyle Seale Pkwy and Vista Colina intersection. The development is wholly within the extra-territorial jurisdiction (ETJ) of San Antonio and in Bexar County, Texas.

Currently, the site is undeveloped with natural vegetation and trees. Huesta Creek borders the property to the west but the 100-year floodplain does not encroach within the property limits. The proposed development is 137 multifamily units, 49 townhome units and 99 stand-alone rentals across the 48.4 acres. This includes the construction of two access drives from Kyle Seale Parkway into the development, parking areas, and utilities. The post-construction impervious cover is ±23.45-acres (48.5%).

The Permanent Best Management Practice (PMBP) used on this site are two (2) Batch Detention Basins, one (1) BayFilter, and vegetative filter strips. These PBMPs will be used to treat 23.45-acres of impervious cover associated with this development. Please see the Treatment Summary Table attached with this application.

The uncaptured areas will be treated by oversizing the two batch detention basins. The combined treatment of the four (4) BMPs will act to remove 80% of the increased Total Suspended Solids (TSS) load from the entire site in accordance with TCEQ's technical guidance manual.

The table below summarizes each drainage area and the associated TSS load.

DRAINAGE AREA TREATMENT SUMMARY				
DRAINAGE AREA	TOTAL ACREAGE (acres)	TOTAL IMERVIOUS COVER (acres)	Lm GENERATED (lbs)	Lm TREATED (lbs)
DA-1	18.93	7.28	5,940	5,940
DA-2	16.99	11.04	9,009	9,564
DA-3	6.43	2.70	2,203	2,293
DA-4	2.47	1.64	1,338	1,338
OT-1 (uncaptured)	1.34	0.28	228	0
OT-2 (uncaptured)	2.03	0.40	327	0
OT-3 (uncaptured)	0.18	0.11	90	0
DA-OFFSITE	2.91	0.00	0	0
TOTAL	48.38	23.45	19,135	19,135

PBMP SUMMARY				
PBMP	PBMP TYPE	DRAINAGE AREAS	OVERTREATED AREAS	Lm TREATED (lbs)
A	BATCH DETENTION	DA-1	OT-3	5,940
B	BATCH DETENTION	DA-2	OT-1, OT-2	9,564
C	ENGINEERED VEGETATIVE FILTER STRIPS	DA-3		2,293
D	ADS BAYFILTER	DA-4		1,338
TOTAL				19,135

ATTACHMENT D

FACTORS AFFECTING SURFACE WATER QUALITY

Attachment D - Factors Affecting Surface Water Quality

The materials and sources of pollution listed below are anticipated to be present on-site during construction and as such may affect the quality of storm water discharges from the site during construction: (This is not an all-inclusive list)

1. Concrete/Masonry
2. Metal studs, Metal reinforcing bars, etc.
3. Tar
4. Fertilizers
5. Petroleum based products
6. Cleaning solvents/Detergents
7. Wood
8. Soil erosion due to clearing of the site
9. Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings
10. Hydrocarbons from asphalt paving operations
11. Miscellaneous trash and litter from construction workers and material wrappings
12. Concrete truck washout
13. Potential overflow/spills from portable toilets

Material management practices will be utilized to reduce the risk of spills, or other accidental exposure of the materials listed above to storm water runoff, including the following:

1. An effort shall be made to store only enough product required to complete the work as so defined in the approved construction documents.
2. All materials stored on-site shall be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
3. Products should be kept in their original containers with the original manufacturer's label.
4. Manufactures' recommendations for proper use and disposal shall be followed.
5. Substances shall not be mixed with one another unless recommended by the manufacturer.
6. Whenever possible, all a product shall be used before disposing of its respective container.

7. The site superintendent should inspect daily to ensure proper use and disposal of on-site materials.

Post-Construction

The materials listed below are anticipated to be present on-site after construction and as such may present a potential pollutant source: (This is not an all-inclusive list).

1. Vehicle Fluid and Petroleum based products (Motor Oil, Brake Fluid, Etc.)
2. Trash and Debris (Litter)
3. Discarded Food and Tobacco Products
4. Dirt and dust from vehicles

These and other sources of pollutants which may affect storm water quality will be screened and filtered by proposed water quality ponds that will treat the storm water prior to releasing into the creek. All ponds will undergo periodic maintenance and cleaning to keep the integrity and effectiveness of treatment efficiency.

ATTACHMENT E

VOLUME AND CHARACTER OF STORM WATER

Attachment E – Volume and Character of Stormwater

Stormwater runoff will increase as a result of this development. For a 25-year storm event, the overall project will generate approximately 320.26 cfs. The runoff coefficient for the site changes from approximately 0.75 before development to 0.81 after development. Values are based on the Rational Method using runoff coefficients from the City of San Antonio Unified Development Code.

ATTACHMENT F

SUITABILITY LETTER FROM AUTHORIZED AGENT
(Not Applicable)

ATTACHMENT G

ALTERNATIVE SECONDARY CONTAINMENT METHODS (Not Applicable)

ATTACHMENT H

AST CONTAINMENT STRUCTURE DRAWINGS
(Not Applicable)

ATTACHMENT I

20% OR LESS IMPERVIOUS COVER
(Not Applicable)

ATTACHMENT J

BMPs FOR UPGRADIENT STORMWATER

Attachment J –BMPS for Upgradient Storm Water

There is a small amount of upgradient stormwater that will flow onto the site from Kyle Seale Parkway. Approximately 2.91 acres of area conveying 31.30 cfs of storm water. Upgradient stormwater has been treated prior to entering the site. However, it is not feasible to bypass this water, as a result the imported BMPs will be sized appropriately to handle the upgradient flows.

ATTACHMENT K

BMPs FOR ONSITE STORMWATER

Attachment K –BPMS for On-Site Stormwater

The Permanent Best Management Practice (PMBP) used on this site are two (2) Batch Detention Basins, one (1) BayFilter, and vegetative filter strips. These PBMPs will be used to treat 23.45-acres of impervious cover associated with this development. Please see the Treatment Summary Table attached with this application.

Overtreatment Areas 1, 2 and 3 are unable to be captured by a permanent BMP. The uncaptured areas will be treated by oversizing the two batch detention basins. The combined treatment of the four (4) BMPs will remove 80% of the increased Total Suspended Solids (TSS) load from the entire site in accordance with TCEQ's technical guidance manual.

ATTACHMENT L

BMPs FOR SURFACE STREAMS

Attachment L - BMPs for Surface Streams

The proposed impacted area does not have any surface streams nor does it abut any surface stream. Site runoff will be treated by the proposed BMPs prior to release to Huesta Creek Tributary, which runs alongside the western boundary of the property.

ATTACHMENT M

CONSTRUCTION PLANS

Attachment M - Construction Plans

All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are located in the Exhibits section and, if applicable include:

1. Design calculations (TSS removal calculations)
2. TCEQ construction notes
3. All proposed structural BMP(s) plans and specifications

ATTACHMENT N

INSPECTION, MAINTENANCE REPAIR, AND RETROFIT PLAN

Batch Detention Basin

TCEQ Technical Guidance on Best Management Practices 2005

Section 3.2.17 Batch Detention Basins TCEQ

A batch detention basin is an extended detention basin modified to operate as a batch reactor. A valve on the first detention basin outlet is used to capture the produced runoff for a fixed amount of time and then release it. As in an extended detention basin, the batch detention basin is primarily used to remove particulate pollutants and to reduce maximum runoff rates associated with development to their pre-development levels. Batch detention basins have superior water quality performance than traditional extended detention basins and achieve a total suspended solids (TSS) removal efficiency of 91%. (Middleton et al., 2006).

These devices require less area and hydraulic head than sand filters, and provide similar TSS removal. The detention basins may be berm-encased areas, excavated basins, or buried tanks, although the latter are not preferred in most situations (below grade configurations will only be acceptable for sites of less than 5 acres). An example of a batch detention basin is pictured below in Figure 2.

A description of a batch detention basin is a series of depressed basins. The first basin temporarily stores a portion of stormwater runoff following a storm event. The collected discharge is controlled by a valve connected to the outlet structure of the first detention basin. The valve is closed between storm events. A controller opens the valve and releases the captured runoff into the second basin after a 12-hour detention time, and closes the valve after the first basin has drained. Substantial removal of TSS is achieved in the captured stormwater since the entire first flush volume is treated. Batch detention basins do not have a permanent water pool between storm events.

Selection Criteria

- Use when BMP methods are limited, because can achieve more than 80% TSS removal
- Use where water availability prevents use of wet basins
- Use where land availability is restricted (site is less than 5 acres for below grade)

- installation) and there is little elevation head available
- Use where Hazardous Material Trap is required

Limitations

- As an active device, it may require more maintenance than a passive BMP.
- Placement of controller and actuator
- Drainage area less than 100 acres

Cost Considerations

This BMP is less expensive than sand filters, wet ponds, and created wetlands, but more expensive than grassy swales and vegetated buffer strips. Cost savings over sand filters results from smaller footprint and reduced construction costs.

There are items to consider when designing a batch detention basin that can reduce the cost of construction. The largest single cost for the installation of a batch extended detention dry pond is the cost of excavation. Limiting the volume of excavation can therefore reduce costs substantially. This can be accomplished by utilizing natural depressions and topography as much as possible. In cases where a flood control basin already exists at the site, it may be possible to convert the existing BMP structure to provide batch detention by increasing the storage volume and modifying the outlet structure. If feasible, the conversion to a BMP structure can be made for a fraction of the cost of constructing a new pond.

In addition to construction costs, maintenance costs must also be included when considering a batch detention basin. Routine maintenance costs can include money for such items as mowing, inspections, trash removal, erosion control, automatic controller repairs, and nuisance control. Non-routine maintenance costs to consider include structural basin repairs, sediment removal, and eventual replacement of the outlet structure. The frequency of sediment removal varies from basin to basin depending on the amount of sediment in the captured runoff. It is estimated, however, that batch detention basins should require sediment removal approximately every 5 to 10 years. The estimated life of outlet structures is approximately 25 years for corrugated metal and 50 to 75 years for reinforced concrete. The total annual cost for the above

maintenance requirements, for both routine and non-routine maintenance has been estimated at three to five percent of the base construction cost.

Section 3.4.18 Design Criteria for Batch Detention Basins

Batch detention basins capture and temporarily detain the water quality volume from a storm event using an automated controller and valve. They are intended to serve primarily as settling basins for the solids fraction, and as a means of limiting downstream erosion by controlling peak flow rates during erosive events. Batch detention basins may be constructed either online or offline, however, offline structures are preferred.

Batch detention basins are designed to prevent clogging of the outflow structure and resuspension of captured sediment during a discharge. They also provide enhanced dissolved pollutant removal performance. The batch detention design typically incorporates a non-clogging outflow structure, such as an orifice protected by a trash rack, or a perforated riser pipe protected by riprap.

Batch extended detention basins may be used in very small watersheds (no minimum size), since the discharge is regulated by a valve instead of an orifice. In addition, batch detention basins tend to accumulate debris deposits rapidly, making regular maintenance necessary to minimize aesthetic and performance problems. Batch detention basins can readily be combined with flood and erosion control detention basins by providing additional storage above the water quality volume as illustrated below in Figure 2.

Design Criteria

Basin geometry of a batch detention basin is not critical to performance allowing for flexible basin designs with ability to accommodate to the site's constraints and to incorporate aesthetic appeal. Basins can range from concrete lined to earthen lined designs. Some constraints, other than the existing topography, include, but are not limited to, the location of existing and proposed utilities, depth to bedrock, and location and number of existing trees. Batch detention basins do not require a long flow path to operate effectively, as do extended detention basins.

1. Facility Sizing - The required water quality volume is calculated and discussed in Section 3.3. This water quality volume should be increased by a factor of 20% to accommodate reductions in the available storage volume due to deposition of solids in the time between full-scale maintenance activities. A fixed vertical sediment depth marker should be installed in the first detention basin to indicate when sediment accumulation reaches a required removal depth of 6 inches.
2. Basin Configuration - The basin should maintain a longitudinal slope between 1.0 - 5.0 % with a lateral slope between 1.0 – 1.5%. A low flow channel can be provided, if desired, in order to improve drainage. No particular length to width ratio is required since all the runoff is detained for 12 hours. Maximum water depth for the water quality volume should not exceed 5 feet.
3. Controller - The controller consists of a level sensor in the detention basin, a valve (with a default closed position), an actuator, and the associated control logic. The controller detects water filling the basin from the level sensor and initiates a 12-hour detention time. At the end of the required detention time, the controller opens the valve and drains into the second basin. Subsequent rainfall events that occur prior to the basin draining should cause the valve to remain open and allow the additional stormwater runoff to pass through the basin. Once the basin is drained the controller closes the valve. The drawdown time of the basin should not exceed 48 hours for a single storm event after the 12 hour required detention time. All cables should be protected by conduit and buried to prevent damage during maintenance activities. Information on the design and configuration of an existing system, including the system schematic, can be viewed at the Austin or San Antonio Regional Offices.

Other information to be submitted in the plan:

- Power – Indicate whether the system is line or solar powered, and the voltage of the controller and actuator. Also describe how the system will respond to a loss of power in the middle of a cycle if backup battery power is not provided;
- Logic Controller – Identify the model of controller selected and provide a general overview of cycles. The controller should be programmed to begin draining stormwater runoff from the basin 12 hours after the first stormwater runoff is sensed. The system should be programmed to have the valve remain open for two hours after the level sensor indicates the basin is empty to allow any remaining shallow water to be discharged. The system should provide the following: a test sequence, be able to deal with low battery/power outages, an on/off/reset switch, manual open/close switches (maintenance/spill), clearly visible external indicator to indicate a cycle is in progress without opening the box, and ability to exercise the valve to prevent seizing;
- Parts Enclosure – Provide a general description of the lockable parts enclosure;
- Circuit – Provide a block diagram of site specific controller circuit, such as the illustrated example found below;
- Nature of Event Sensing – Identify the type of sensor used to indicate the water level in the basin. In addition, the sensor must be located on a concrete pad or

other location where vegetation and debris will not affect its operation. Mercury free float switches are an appropriate choice;

- Valve – Identify the model of valve proposed, size, type, pressures, and overtorque sensors. A manual override should be provided. A ball valve can be appropriate for smaller pipes (nothing to impede the flow or to capture trash and debris. On larger pipes compressed air driven bladder valves could be used;
 - Temperature/Weather – Design the system to operate at 0 to 130°F, and 10 to 90% humidity;
 - Reliability — 40,000 hours (approximately 4.6 years) or greater;
 - Safety Precautions – Alarm system clearly visible to indicate system malfunction, with sign posted with phone numbers of the owner and appropriate TCEQ regional office; and
 - Power Consumption - Total wattage and W-hours of actuator, controller, and relay.
4. Hazardous Material Threat (HMT) Operation – The basin's outlet valve is normally closed and will detain a hazardous material spill. However, after a spill occurs, the manual controls on the controller or the actuator/valve are used to prevent the valve from automatically opening prior to removal of the hazardous material. Although not required by the Edwards Rules, the HMT operation can be used to comply with Appendix A of RG-348. If a spill does occur in the basin, all components of the controller must be inspected and checked for proper operation within 7 days.
 5. Pond Side Slopes - Side slopes of the pond should be 3:1 (H:V) or flatter for grass stabilized slopes. Slopes steeper than 3:1 (H:V) must be stabilized with an appropriate slope stabilization practice.
 6. Basin Lining – Basins must be constructed to prevent possible contamination of groundwater below the basin. Basin linings should conform to guidelines found in Section 3.4.2 of this document.
 7. Basin Inlet – Energy dissipation is required at the basin inlet to reduce resuspension of accumulated sediment. Rock riprap or another filter system must be placed at the basin inlet to reduce velocities to less than 3 feet per second.
 8. Outflow Structure – Batch extended detention facilities use the same outlet structures as extended detention basins with the replacement of an orifice with a single valve operated by an actuator. In general, the outflow structure should have a trash rack or other acceptable means of preventing clogging at the entrance to the outflow pipes or of the valve (see Figure 3 for an example). The outflow structure should be sized to allow for complete drawdown of the water quality volume within 48 hours after the required detention time. Velocity controls are required at the discharge point to prevent erosion and scour. For online facilities, the principal and emergency spillways must be sized to provide 1.0 foot of freeboard during the 25-year event and to safely pass the flow from 100-year storm.

9. Vegetation - A plan should be provided indicating how the basin will be stabilized, with vegetation, stone, or concrete. If vegetation is used for stabilization, the facility should be planted and maintained to provide for a full and robust cover. Vegetation on the basin embankments should be mowed as appropriate to prevent the establishment of woody vegetation.
10. Splitter Box - When the basin is designed as offline, a splitter structure is used to isolate the water quality volume and bypass the remaining flow around the system once the entire water quality volume has been captured. The splitter box, or other flow diverting approach, should be designed to convey the 25-year storm event while providing at least 1.0 foot of freeboard along pond side slopes. Velocity controls are required at the bypass discharge point to prevent erosion and scour.
11. Erosion Protection at the Outfall - For online basins, special consideration should be given to the facility's outfall location. Flared pipe end sections that discharge at or near the stream invert are preferred. The channel immediately below the pond outfall should be modified to conform to natural dimensions, and lined with large stone riprap placed over filter cloth. A stilling basin may be required to reduce flow velocities from the primary spillway to non-erosive velocities.
12. Safety Considerations - Safety is provided either by fencing of the facility or by managing the contours of the basin to eliminate dropoffs and other hazards. Earthen side slopes should not exceed 3:1 (H:V) and should terminate on a flat safety bench area. Landscaping can be used to impede access to the facility. The primary spillway opening must not permit access by children. Outfall pipes more than 48 inches in diameter should be fenced.

Section 3.5.20 Maintenance Guidelines for Batch Detention Basins

Batch detention basins may have somewhat higher maintenance requirements than an extended detention basin since they are active stormwater controls. The maintenance activities

are identical to those of extended detention basins with the addition of maintenance and inspections of the automatic controller and the valve at the outlet.

Inspections. Inspections should take place a minimum of twice a year. One inspection should take place during wet weather to determine if the basin is meeting the target detention time of 12 hours and a drawdown time of no more than 48 hours. The remaining inspections should occur between storm events so that manual operation of the valve and controller can be verified. The level sensor in the basin should be inspected and any debris or sediment in the area should be removed. The outlet structure and the trash screen should be inspected for signs of clogging. Debris and sediment should be removed from the orifice and outlet(s) as described in previous

sections. Debris obstructing the valve should be removed. During each inspection, erosion areas inside and downstream of this BMP should be identified and repaired/revegetated immediately.

Mowing. The basin, basin side-slopes, and embankment of the basin must be mowed to prevent woody growth and control weeds. A mulching mower should be used, or the grass clippings should be caught and removed. Mowing should take place at least twice a year, or more frequently if vegetation exceeds 18 inches in height. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas.

Litter and Debris Removal. Litter and debris removal should take place at least twice a year, as part of the periodic mowing operations and inspections. Debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed.

Erosion control. The basin side slopes and embankment all may periodically suffer from slumping and erosion. To correct these problems, corrective action, such as regrading and revegetation, may be necessary. Correction of erosion control should take place whenever required based on the periodic inspections.

Nuisance Control. Standing water or soggy conditions may occur in the basin. Some standing water may occur after a storm event since the valve may close with 2 to 3 inches of water in the basin. Some flow into the basin may also occur between storms due to spring flow and residential water use that enters the storm sewer system. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.).

Structural Repairs and Replacement. With each inspection, any damage to structural elements of the basin (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. An example of this type of repair can include patching of cracked concrete, sealing of voids, removal of vegetation from cracks and joints. The various inlet/outlet structures in a basin will eventually deteriorate and must be replaced.

Sediment Removal. A properly designed batch detention basin will accumulate quantities of sediment over time. The accumulated sediment can detract from the appearance of the facility and reduce the pollutant removal performance of the facility. The sediment also tends to accumulate near the outlet structure and can interfere with the level sensor operation. Sediment shall be removed from the basin at least every 5 years, when sediment depth exceeds 6 inches, when the sediment interferes with the level sensor or when the basin does not drain within 48 hours. Care should be taken not to compromise the basin lining during maintenance.

Logic Controller. The Logic Controller should be inspected as part of the twice yearly investigations. Verify that the external indicators (active, cycle in progress) are operating properly by turning the controller off and on, and by initiating a cycle by triggering the level sensor in the basin. The valve should be manually opened and closed using the open/close switch to verify valve operation and to assist in inspecting the valve for debris. The solar panel should be inspected and any dust or debris on the panel should be carefully removed. The controller and all other circuitry and wiring should be inspected for signs of corrosion, damage from insects, water leaks, or other damage. At the end of the inspection, the controller should be reset.



Name of Owner/Agent



Signature of Owner/Agent

2-7-19

Date

Mary Jane Phillips, P.E.

Stantec Consulting Services, Inc. TBPE F-6324



Signature/Seal of Professional Engineer



2/13/19

The Professional Engineer is signing as the preparer of the document. The owner/agent is signing as the responsible party to ensure that the inspection, maintenance, repair, and retrofit plan items mentioned above will be compiled with per the regulations of TCEQ.

Baysaver BayFilter

Maintenance on Baysaver BayFilter

Due to the high level of pollutant variation and specifically sediment loading, the unit shall be inspected at least every other month during the first year of operation to determine loading and required maintenance intervals. This information can be used to establish an appropriate maintenance schedule for subsequent years. If soil disturbing activities are being conducted within the unit's drainage area, inspection frequencies must be increased to once each month and after rain events of 0.5" and larger. The maintenance cycle of the BayFilter system will be driven mostly by the actual solids load on the filter. The system should be periodically monitored to be certain it is operating correctly.

Indications of the need for maintenance:

- Effluent flow decreasing to below the design flow rate or decrease in treatment below required levels (e.g., greater than 24hr drain down for a volume based system, or the detention drain down time- whichever is greater).
- Filter cartridge replacement should also be considered when sediment levels are at or above the level of the manifold system which is 6 inches and 3 inches for a BayFilter 545 and 545-LP, respectively.
- Bypass occurs during storm events
- If excessive floatables (trash and debris) are present (but no standing water or excessive sedimentation), perform a minor maintenance consisting of gross solids removal, not filter media replacement.
- If standing water above the bottom of the filter cartridge is present in the vault 96 hours after a 2 year rainfall event.
- Removal of trash and silt from the pretreatment chamber

Maintenance & Inspection Procedure

- Remove the manhole covers and open all access hatches.
- Before entering the system make sure the air is safe per OSHA Standards or use a breathing apparatus. Use low O₂, high CO, or other applicable warning devices per regulatory requirements.
- Using a vacuum truck remove any liquid and sediments that can be removed prior to entry.
- Using a small lift or the boom of the vacuum truck, remove the used cartridges by lifting them out.
- Any BayFilters that cannot be readily lifted directly out of the vault should be removed from their location and carried to the lifting point using the Trolley system installed in the vault (if applicable).
- When all BayFilters are removed, remove the balance of the solids and water; then loosen the stainless clamps on the Fernco couplings in the pipe manifold; remove

the drain pipes as well. Carefully cap the manifold and the Ferncos and rinse the floor removing the balance of the collected solids.

- Clean the manifold pipes, inspect, and reinstall.
- Install the exchange BayFilters and close all covers.
- BaySaver Technologies, LLC. states that used BayFilter cartridges may be sent back to them for exchange/recycling and credit on undamaged units. Contact BaySaver Technologies at 1.800.229.7283 for more information.
- According to 30 TAC 330 or 30 TAC 335, identify any special disposal requirements associated with spent media, absorbents, or other material to be generated during routine cleaning/maintenance operations.
- Removed media will be disposed of according to local and state regulations.

Maintenance on Storage System

Underground detention vaults are similar in function as open detention basins. They have moderate to high maintenance requirements, depending on the extent to which future maintenance needs are anticipated during the design stage. Responsibilities for both routine and non-routine maintenance tasks need to be clearly understood and enforced. If regular maintenance and inspections are not undertaken, the basin will not achieve its intended purposes.

Inspections. Storage vaults should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the vault is meeting the target detention times. In particular, the vault's flow control device should be regularly inspected for evidence of clogging, or conversely, for too rapid a release. If the design drawdown times are exceeded by more than 24 hours, then repairs should be scheduled immediately.

Debris and Litter Removal. Debris and litter will accumulate near the vault's flow control device. Particular attention should be paid to floating debris that can eventually clog the control device or riser or orifice.

Structural Repairs and Replacement. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, etc.) should be identified and repaired immediately.

Nuisance Control. Standing water within the bottom of the basin can create nuisance conditions for nearby residents. Odors, mosquitoes, and litter are all occasionally perceived to be problems. Most of these problems are generally a sign that regular inspections and maintenance are not being performed.

Sediment Removal. When properly designed, storage vaults will accumulate quantities of sediment over time. Sediment accumulation is a serious maintenance concern in vaults for several reasons. First, the sediment gradually reduces available stormwater management storage capacity within the vault. Second sediment tends to accumulate

around the control device. Sediment deposition increases the risk that the orifice will become clogged, and gradually reduces storage capacity reserved for pollutant removal. Sediment can also be re-suspended if allowed to accumulate over time. For these reasons, accumulated sediment needs to be removed from the lower stage when sediment buildup fills 20% of the volume of the vault or at least every 10 years.

Manufacturer Contact Information:

ADS/BaySaver Technologies Engineering Department
Email: info@baysaver.com
Phone: 1.800.229.7283
Website: <http://www.baysaver.com/>

Mail or other: 1030 Deer Hollow Drive
Mount Airy, MD 21771

Wm C. Werts

Name of Owner/Agent

Wm C. Werts

Signature of Owner/Agent

2-7-19

Date

Mary Jane Phillips, P.E.

Stantec Consulting Services, Inc. TBPE F-6324

MJP

Signature/Seal of Professional Engineer



2/13/19

The Professional Engineer is signing as the preparer of the document. The owner/agent is signing as the responsible party to ensure that the inspection, maintenance, repair, and retrofit plan items mentioned above will be compiled with per the regulations of TCEQ.

BAYFILTER™ INSPECTION AND MAINTENANCE MANUAL

The BayFilter system requires periodic maintenance to continue operating at the design efficiency. The maintenance process is comprised of the removal and replacement of each BayFilter cartridge, vertical drain down module; and the cleaning of the vault or manhole with a vacuum truck.

The maintenance cycle of the BayFilter system will be driven mostly by the actual solids load on the filter. The system should be periodically monitored to be certain it is operating correctly. Since stormwater solids loads can be variable, it is possible that the maintenance cycle could be more or less than the projected duration.

BayFilter systems in volume-based applications are designed to treat the WQv in 24 to 48 hours initially. Late in the operational cycle of the BayFilter, the flow rate will diminish as a result of occlusion. When the drain down exceeds the regulated standard, maintenance should be performed.

When a BayFilter system is first installed, it is recommended that it be inspected every six (6) months. When the filter system exhibits flows below design levels the system should be maintained. Filter cartridge replacement should also be considered when sediment levels are at or above the level of the manifold system. Please contact the BaySaver Technologies Engineering Department for maintenance cycle estimations or assistance at **1.800.229.7283**.



BayFilter System Cleanout



Vactor Truck Maintenance



Jet Vactoring Through Access Hatch

Maintenance Procedures

1. Contact BaySaver Technologies for replacement filter cartridge pricing and availability at 1-800-229-7283.
2. Remove the manhole covers and open all access hatches.
3. Before entering the system make sure the air is safe per OSHA Standards or use a breathing apparatus. Use low O₂, high CO, or other applicable warning devices per regulatory requirements.
4. Using a vacuum truck remove any liquid and sediments that can be removed prior to entry.
5. Remove the hold down bars. Using a small lift or the boom of the vacuum truck, remove used cartridges by lifting them out.
6. Any cartridges that cannot be readily lifted can be easily slid along the floor to a location they can be lifted via a boom lift.
7. When all the cartridges have been removed, it is now practical to remove the balance of the solids and water. Loosen the stainless clamps on the Fernco couplings for the manifold and remove the drain pipes as well. Carefully cap the manifold and the Ferncos and rinse the floor, washing away the balance of any remaining collected solids.
8. Clean the manifold pipes, inspect, and reinstall.
9. Install the exchange cartridges, reinstall the hold down bars and close all covers.
10. The used cartridges may be sent back to BaySaver Technologies for recycling.



Manifold Tee View of a Cleaned System



Cartridge Hoist Point

For more information please see the BaySaver website at www.baysaver.com or contact 1-800-229-7283.

THE MOST **ADVANCED** NAME IN WATER MANAGEMENT SOLUTIONS™

Vegetative Filter Strips

TCEQ Technical Guidance on Best Management Practices 2005

Section 3.5.8 Vegetative Filter Strips from TCEQ Design Manual 2005:

"Once a vegetated area is well established, little additional maintenance is generally necessary. The key to establishing a viable vegetated feature is the care and maintenance it receives in the first few months after it is planted. Once established, all vegetated BMPs require some basic maintenance to insure the health of the plants including:

- *Pest Management.* An Integrated Pest Management (IPM) Plan should be developed for vegetated areas. This plan should specify how problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.
- *Seasonal Mowing and Lawn Care.* If the filter strip is made up of turf grass, it should be mowed as needed to limit vegetation height to 18 inches, using a mulching mower (or removal of clippings). If native grasses are used, the filter may require less frequent mowing, but a minimum of twice annually. Grass clippings and brush debris should not be deposited on vegetated filter strip areas. Regular mowing should also include weed control practices, however herbicide use should be kept to a minimum (Urbonas et al., 1992). Healthy grass can be maintained without using fertilizers because runoff usually contains sufficient nutrients. Irrigation of the site can help assure a dense and healthy vegetative cover.
- *Inspection.* Inspect filter strips at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is most desirable. The strip should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. More frequent inspections of the grass cover during the first few years after establishment will help to determine if any problems are developing, and to plan for long-term restorative maintenance needs. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Construction of a level spreader device may be necessary to reestablish shallow overland flow.
- *Debris and Litter Removal.* Trash tends to accumulate in vegetated areas, particularly along highways. Any filter strip structures (i.e. level spreaders) should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection, but should be performed no less than 4 times per year.
- *Sediment Removal.* Sediment removal is not normally required in filter strips, since the vegetation normally grows through it and binds it to the soil. However, sediment may accumulate along the upstream boundary of the strip preventing uniform overland flow. Excess sediment should be removed by hand or with flat-bottomed shovels.

- **Grass Reseeding and Mulching.** A healthy dense grass should be maintained on the filter strip. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level. Grass damaged during the sediment removal process should be promptly replaced using the same seed mix used during filter strip establishment. If possible, flow should be diverted from the damaged areas until the grass is firmly established. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Corrective maintenance, such as weeding or replanting should be done more frequently in the first two to three years after installation to ensure stabilization. Dense vegetation may require irrigation immediately after planting, and during particularly dry periods, particularly as the vegetation is initially established."



Name of Owner/Agent



Signature of Owner/Agent

2-7-19

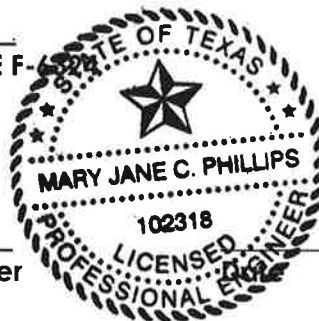
Date

Mary Jane Phillips, P.E.

Stantec Consulting Services, Inc. TBPE F-6522



Signature/Seal of Professional Engineer



2/13/19

The Professional Engineer is signing as the preparer of the document. The owner/agent is signing as the responsible party to ensure that the inspection, maintenance, repair, and retrofit plan items mentioned above will be compiled with per the regulations of TCEQ.

ATTACHMENT O

PILOT-SCALE FIELD TESTING PLAN (Not Applicable)

ATTACHMENT P

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Attachment P - Measures for Minimizing Surface Stream Contamination

Depending of the area of the site, surface water runoff will be treated by either batch detention basin or collected via an underground storm sewer system and treated by a BayFilter cartridge system. These BMPS will reduce the potential for surface stream contamination downstream of the site.

TEMPORARY STORMWATER SECTION

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Stantec c/o Ryan Whittle, P.E.

Date: 3/11/19

Signature of Customer/Agent:

Ryan Whittle

Regulated Entity Name: +/- 48-acre Sonoma Verde Multi Family Tract

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

☒ The following fuels and/or hazardous substances will be stored on the site: construction equipment fuel

These fuels and/or hazardous substances will be stored in:

☒ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

- ☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
- ☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
- ☐ Fuels and hazardous substances will not be stored on the site.
- 2. ☐ **Attachment A - Spill Response Actions.** A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.
- 3. ☐ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- 4. ☐ **Attachment B - Potential Sources of Contamination.** A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

- 5. ☐ **Attachment C - Sequence of Major Activities.** A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.
 - ☐ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.
 - ☐ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
- 6. ☐ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: _____

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

- 7. ☐ **Attachment D – Temporary Best Management Practices and Measures.** TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

- ☐ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
 - ☐ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
 - ☐ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
 - ☐ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
8. ☐ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
- ☐ **Attachment E - Request to Temporarily Seal a Feature.** A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
 - ☐ There will be no temporary sealing of naturally-occurring sensitive features on the site.
9. ☐ **Attachment F - Structural Practices.** A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.
10. ☐ **Attachment G - Drainage Area Map.** A drainage area map supporting the following requirements is attached:
- ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
 - ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
 - ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
 - ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

- ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.
11. ☐ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.
- ☐ N/A
12. ☐ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.
13. ☐ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.
14. ☐ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
15. ☐ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.
16. ☐ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. ☐ **Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices.** A schedule of the interim and permanent soil stabilization practices for the site is attached.

- 18. ☐ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
- 19. ☐ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

- 20. ☐ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.
- 21. ☐ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.
- 22. ☐ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

ATTACHMENT A

SPILL RESPONSE ACTIONS

Attachment A – Spill Response Actions

Potential Source:

Spills of Hydrocarbons or other hazardous substances.

Preventative Measures:

The following practices will be used to reduce the risks associated with hazardous materials, if hazardous materials are needed for the work:

Education/General Measures

1. Products will be kept in original containers unless they are not resealable.
2. Original labels and material safety data will be retained.
3. Modify the Storm Water Pollution Prevention Plan to include the information dealing with, and the steps needed to correct, the encountered hazardous waste spill.
4. Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.
5. Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
6. Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
7. Establish a continuing education program to indoctrinate new employees.
8. Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.
9. To the extent that the work can be accomplished safely, spills of oil, petroleum products, and substances listed under 40 CFR parts 110,117, and 302, as well as sanitary and septic wastes should be contained and cleaned up immediately.
10. Store hazardous materials and wastes in covered containers and protect from vandalism.
11. Place a stockpile of spill cleanup materials where it will be readily accessible.
12. Train employees in spill prevention and cleanup.

13. Designate responsible individuals to oversee and enforce control measures.
14. Spills should be covered and protected from storm water run-on during rainfall to the extent that it doesn't compromise clean up activities.
15. Do not bury or wash spills with water.
16. Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
17. Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
18. Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
19. Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
20. Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

If surplus product must be disposed of, manufacturers' or local and state recommended methods for proper disposal will be followed.

Spill Measures:

In the event that hazardous wastes are encountered, they will be disposed of in the manner specified by local or state regulations.

Cleanup

1. Clean up leaks and spills immediately.
2. Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
3. Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

1. Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
2. Use absorbent materials on small spills rather than hosing down or burying the spill.
3. Absorbent materials should be promptly removed and disposed of properly.
4. Follow the practice below for a minor spill:
5. Contain the spread of the spill.
6. Recover spilled materials.
7. Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

Spills should be cleaned up immediately

1. Contain spread of the spill.
2. Notify the project foreman immediately.

3. If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
4. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
5. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

Spills of hazardous waste in amounts that equal or exceed Reportable Quantity (RQ), as defined by the EPA through issued regulations (40 CFR Part 110, 40 CFR Part 117, 40 CFR Part 119 or 40 CFR Part 302), will be handled in the following steps:

1. Notify the National Response Center immediately at 1-800-424-8802.
2. Notify TCEQ immediately at 1-210-490-3096 between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
3. Submit a written description of the release to the EPA Region 11 office providing the date and circumstances of the release and the steps to be taken to prevent another release:

Attn: Hazardous Waste Dept.
1445 Ross Ave. STE 1200
Dallas, TX 75202
1-214-665-2224 (Region 6 Emergency Line)

4. The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
5. Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tnrcc.state.tx.us/enforcement/emergency_response.html

Vehicle Measures:

Vehicle and Equipment Maintenance

1. If maintenance must occur on-site, use a designated area and a secondary containment, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.
2. Regularly inspect on-site vehicles and equipment for leaks and repair immediately.
3. Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
4. Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
5. Place drip pans or absorbent materials under paving equipment when not in use.
6. Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
7. Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
8. Oil filters disposed of in trashcans or dumpsters can leak oil and pollute storm water. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
9. Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

1. If fueling must occur on-site, use designated areas, located away from drainage courses, to prevent the run-on of storm water and the runoff of spills.
2. Discourage "topping off" of fuel tanks.
3. Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

ATTACHMENT B

POTENTIAL SOURCES OF CONTAMINATION

Attachment B - Potential Sources of Contamination.

Potential Source:	Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle dripping.
Preventative Measures:	Vehicle maintenance when possible will be performed within the construction staging area or at a local maintenance shop.
Potential Source:	Miscellaneous trash and litter from construction workers and material wrappings.
Preventative Measures:	Trash containers will be placed throughout the site to encourage proper trash disposal.
Potential Source:	Construction debris.
Preventative Measures:	Construction debris will be monitored daily by contractor. Debris will be collected and placed in disposal bins. Situations requiring immediate attention will be addressed on a case-by-case basis.
Potential Source:	Silt leaving the site.
Preventative Measures:	Contractor will monitor all vehicles leaving the site to prevent tracking silt and mud onto public streets. The contractor will ensure that trucks will be washed down to minimize the amount of silt leaving the site.
Potential Source:	Construction related portable toilets.
Preventative Measures:	Any on-site portable toilets will be in good working order with no defects that cause leaks. All portable toilets will be maintained to ensure no overflowing of sewage.

ATTACHMENT C

SEQUENCE OF MAJOR ACTIVITIES

Attachment C - Sequence of Major Activities.

The sequence of work described below will be accomplished through the timing of proposed work relating the maintenance of service (i.e. proposed utility installation as compared to the removal/abandonment of existing utilities). Below is a general sequence of events to be followed:

1. Obtain all required permits.
2. Install all Erosion Control Measures and Devices that can be installed prior to site clearing.
3. Install tree preservation fencing in accordance with City of San Antonio requirements for all trees which are noted to remain per the approved Tree Preservation Plan/Permit.
4. Clear site of any vegetation, trees, root balls, and topsoil necessary.
5. Begin Earthwork Activities, removal of rock and other material to establish a construction site consistent with the grading plan. The site will be rough graded to match the post developed drainage divides, and the contractor will begin construction of the building pad and foundation.

The contractor will be required to provide temporary sedimentation traps within the site in addition to perimeter BMP controls.
6. Install storm sewer and sanitary sewer mains.
7. Install private storm sewer system, site utilities, and begin vertical construction of the building(s).
8. Contractor to install pavement base material, curb and gutter, and utility conduits. Sedimentation traps to be located at the point source locations and around site inlets as necessary to allow for construction of the water quality basins.
9. Construct driveway aprons, parking lot paving, and flat work within the site.
10. Install final stabilization including plantings, flatwork, hardscape, and landscape materials. Clear water quality ponds of all sedimentation and install final water quality controls to include filter media and internal drainage piping.
11. Inspect and maintain all erosion control measures until all disturbed offsite and on-site areas have been hydromulched or sodded in accordance with the landscape plan and a mowable stand of grass is achieved.

Total Site Area/Total Disturbed Area

The total area of the site is 48.4 acres. Excavation, grading, or other activities throughout the construction process will only disturb the above mentioned ± 29.31 acres.

ATTACHMENT D

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

Attachment D – Temporary Best Management Practices and Measures.

- a. A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.**

Approximately 2.91 acres of stormwater originates within the pavement on Kyle Seale Parkway and is discharged onto our site via curb inlet and culvert. This existing area will not be disturbed, and the BMP batch detention basins will be sized as appropriate to treat this excess impervious cover area.

Silt fencing will be placed along the boundary line of the majority of the tract. Inlet protection and triangular filter dikes will be placed as necessary. These Temporary BMPs will be installed along the boundary of the disturbed area. A temporary construction entrance will be installed to prevent tracking materials offsite. In addition, a concrete truck washout pit will be placed on-site and be accessible to all exiting traffic leaving the site. By this, the Temporary BMPs will prevent pollution of surface water that originates on-site.

- b. A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.**

Stormwater will be collected by a drainage system and conveyed to the proposed BMPs located onsite. There, the pollutants absorbed by the runoff water will be treated and the filtered water will be discharged to Huesta Creek.

- c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.**

Stormwater will be collected by a drainage system and conveyed to the proposed BMPs located onsite. There, the pollutants absorbed by the runoff water will be treated and the filtered water will be discharged to Huesta Creek.

- d. A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting or construction.**

This site is located entirely over the Edwards Aquifer Contributing Zone, therefore a Geological Assessment was not conducted and is not required; therefore, no sensitive features were identified.

ATTACHMENT E

REQUEST TO TEMPORARILY SEAL A FEATURE
(Not Applicable)

ATTACHMENT F

STRUCTURAL PRACTICES

Attachment F - Structural Practices.

Silt fencing, triangular sediment filter dikes, inlet protection devices, and stabilized construction entrances will be incorporated as temporary erosion control devices and will be removed after permanent stabilization is established.

Silt fencing shall be incorporated throughout the construction process. The placement of the silt fencing shall be perpendicular to runoff flow. Refer to project construction documents for quantity and actual locations of these erosion control devices. In areas where silt fencing is to be situated but is non-installable, triangular filter dikes shall be incorporated.

Stabilized construction entrances will be employed during the construction of this development to help minimize vehicle tracking of sediments. Paved streets adjacent to these site entrances shall be cleaned regularly to remove any excess mud, dirt or rock tracked from the site. Refer to the project construction documents for actual locations of these erosion control devices. Staging areas will be utilized in locations as decided by the project general contractor and validated by the civil engineer. If the contractor determines the need for additional stabilized construction entrances, construction staging areas or pits, their locations shall be agreed upon by the contractor and the engineer.

ATTACHMENT G

DRAINAGE AREA MAP

Attachment G – Drainage Area Map

Please refer to the Exhibits sections of this application for Contributing Zone Plan site plans.

ATTACHMENT H

TEMPORARY SEDIMENT POND(S) PLANS AND CALCULATIONS

Attachment H - Temporary Sediment Pond Plans and Calculations

A temporary sediment basin will be constructed to prevent sediment loss during construction.

PBMP – Batch Detention Basin A

Sizing

Total Capture Volume = 34,444 ft³

Total Capture Volume provided = 41,229 ft³

Riser Pipe Perforation Calculation

$$A_o = \frac{A_s \times 7\sqrt{2h}}{C_d \times 980,000} = 0.50 \text{ ft}^2 = \text{Area of the Dewatering Hole}$$

$$A_s = 9,027 \text{ ft}^2$$

$$H = 11 \text{ ft}$$

$$C_d = 0.6 \text{ ft}$$

A 40' emergency flow weir will be provided

$$Q_{overflow} = CLH^{3/2} = 3.087(40 \text{ ft})(1.07 \text{ ft}^{\frac{3}{2}}) = 137 \text{ cfs}$$

PBMP – Batch Detention Basin B

Sizing

Total Capture Volume = 61,254 ft³

Total Capture Volume provided = 70,794 ft³

Riser Pipe Perforation Calculation

$$A_o = \frac{A_s \times 7\sqrt{2h}}{C_d \times 980,000} = 0.88 \text{ ft}^2 = \text{Area of the Dewatering Hole}$$

$$A_s = 14,276 \text{ ft}^2$$

$$H = 13.5 \text{ ft}$$

$$C_d = 0.6 \text{ ft}$$

A 60' emergency flow weir will be provided

$$Q_{overflow} = CLH^{3/2} = 3.087(60 \text{ ft})(0.81 \text{ ft}^{\frac{3}{2}}) = 135 \text{ cfs}$$

ATTACHMENT I

INSPECTION AND MAINTENANCE FOR BMP'S

Attachment I - Inspection and Maintenance for BMPs.

Each contractor will designate a qualified person (or persons) to perform the following inspections:

1. Disturbed areas and areas used for storage of materials that are exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the drainage system.
2. Erosion and sediment control measures identified in the plan will be observed to ensure that they are operating correctly.
3. Where discharge locations or points are accessible, they will be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.
4. Locations where vehicles enter or exit the site will be inspected for evidence of offsite sediment tracking.
5. Permanent seeding and planting will be inspected for bare spots, washouts and unhealthy growth.

The inspection shall be conducted by the responsible person at least once every seven (7) calendar days and within 24 hours after a storm providing 1/2 inches of rainfall or greater. If one or more of the following conditions apply, the frequency of inspections shall be conducted at least once every month:

1. The site has been either finally or temporarily stabilized.
2. Where runoff is unlikely due to winter conditions (i.e. site is covered with snow, ice, or where frozen ground exists).
3. During seasonal arid periods in arid areas (areas with an average annual rainfall of 0 to 10 inches) and semi-arid areas (areas with an average annual rainfall of 10 to 20 inches).

The information required within an inspection and maintenance report are as follows:

1. Summary of the scope of the inspection.
2. Name(s) and qualifications of personnel making the inspection.
3. The date(s) of the inspection.
4. Major observations relating to the implementation of the storm water pollution prevention plan.
5. Changes required to correct damages or deficiencies in the control measures.

In addition to the required routine inspections, the following record of information will also be maintained:

1. The dates when major grading activities occur.
2. The dates when construction activities temporarily or permanently cease on a portion of the site.
3. The dates when stabilization measures are initiated.

Inspection and maintenance reports as well as all records required by this Storm Water Pollution Prevention Plan shall become part of the Storm Water Pollution Plan. Copies of example forms to be used for the inspection and maintenance reports as well as related records are included in the project's Texas Pollution Discharge Elimination System (TPDES) Report.

MAINTENANCE

Based on the results of the inspection, any changes required to correct damages or deficiencies in the control measures shall be made within seven (7) calendar days after the inspection. If existing stabilization/erosion controls need modification or additional stabilization/erosion controls are necessary, implementation shall be achieved prior to the next anticipated storm event. If, however, the execution of this requirement becomes impractical, then the implementation will occur as soon as possible, with the incident duly noted with an explanation of the impracticality, in the inspection report.

Sediment accumulation at each control will be removed and properly disposed when the depth of accumulation equals or exceeds six (6) inches. If sediment accumulation is found to be contaminated, its disposal shall be off-site in a manner which conforms to the appropriate applicable regulations.

Temporary Construction Entrance/Exit (Section 1.4.2, TCEQ TGM, July 2005)

- (1) The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.
- (2) All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
- (3) When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.
- (4) When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
- (5) All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Silt Fence (Section 1.4.3, TCEQ TGM, July 2005)

- (1) Inspect all fencing weekly, and after any rainfall.
- (2) Remove sediment when buildup reaches 6 inches.
- (3) Replace any torn fabric or install a second line of fencing parallel to the torn section.
- (4) Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
- (5) When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

Triangular Sediment Filter Dikes (Section 1.4.4, TCEQ TGM, July 2005)

- (1) Inspection should be made weekly or after each rainfall event and repair or replacement should be made promptly as needed by the contractor.
- (2) Inspect and realign dikes as needed to prevent gaps between sections.
- (3) Accumulated silt should be removed after each rainfall, and disposed of in a manner which will not cause additional siltation.
- (4) After the site is completely stabilized, the dikes and any remaining silt should be removed. Silt should be disposed of in a manner that will not contribute to additional siltation.

Rock Berms (Section 1.4.5, TCEQ TGM, July 2005)

- (1) Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.
- (2) Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause any additional siltation.
- (3) Repair any loose wire sheathing.
- (4) The berm should be reshaped as needed during inspection.
- (5) The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
- (6) The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

ATTACHMENT J

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION

Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices.

During Construction:

The methodology for handling pollution of on-site or up-gradient storm water during construction will include the following:

1. Silt fencing and rock berms will be used as a temporary erosion and sedimentation controls.
2. Stabilized construction entrances/exits will be put into place to reduce the dispersion of sediment from the site, and to aid in accessibility to the site.
3. A construction staging area will also be put into place for material stockpiles, machinery storage, and machinery maintenance.
4. Concrete truck washout pits will be put into place to prevent contamination of storm water runoff and to aid in the removal of sediments from the site.
5. As required by the TCEQ General Permit, disturbed areas on which construction activity has ceased (temporarily or permanently) and which will be exposed for more than 21 days shall be stabilized within 14 days. Areas receiving less than 20 inches of annual rainfall should be stabilized as soon as practicable and only to pre-project conditions.
6. If construction stops for more than 14 days, hydro-seeding, sod or other TCEQ approved method will be applied to re-stabilize vegetation.

After Construction:

This site will provide the following permanent pollution abatement measures to prevent the pollution of storm water originating on-site or upgradient from the project site:

1. Storm water will be directed to grate inlets via curbing and grading and discharged into the sedimentation/filtration basins. The sedimentation/filtration basins have been designed to capture and filter the required runoff from the individual watersheds. The basin has been designed in accordance with the TCEQ Technical Guidance Manual. Each basin will be constructed as that particular phase is built.
2. Native grasses will be used on-site to help reduce the use of fertilizers and this will in turn reduce the levels of phosphates present in the stormwater runoff.
3. Where possible drainage will be directed across vegetated areas to provide some pretreatment prior to discharge into the filter basin.

Permanent Erosion Control:

1. All disturbed areas shall be restored as noted below:
 - A minimum of 4" of topsoil shall be placed in all drainage channels (except rock) and between the curb and R.O.W. property lines.
2. Broadcast Seeding:
 - From September 15 to March 1, seeding shall be with a combination of 2 pounds per 1,000 SF of unhulled Bermuda and 7 pounds per 1000 SF of Winter Rye with a purity of 95% with 90% germination.
 - From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 2 pounds per 1000 SF with a purity of 95% with 85% germination.
3. Fertilizer shall be a pelleted or granular slow release with an analysis of 15-15-15 to be applied once at planting and once during the period of establishment at a rate of 1 pound per 1,000 SF.
4. Hydraulic Seeding:
 - From September 15 to March 1, seeding shall be with a combination of 1 pound per 1,000 SF of unhulled Bermuda and 7 pounds per 1,000 SF of Winter Rye with a purity of 95% with 90% germination.
 - From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 7 pounds per 1,000 SF with a purity of 95% with 85% germination.
5. Fertilizer shall be a water soluble fertilizer with an analysis of 15-15-15 at a rate of 1 to 1.5 pounds per 1,000 SF (45-65 pounds per acre).
6. Mulch type used shall be hay, straw, or mulch applied at a rate of 45 pounds per 1,000 SF with a soil tackifier at a rate of 1.4 pounds per 1,000 SF.
7. The planted area shall be irrigated or sprinkled in a manner that will not erode the topsoil but will sufficiently soak the soil to a depth of 6". The irrigation shall occur at ten-day intervals during the first two months. Rainfall occurrences of ½" or more shall postpone the watering schedule for one week.
8. Restoration shall be acceptable when the grass has grown at least 1½" high with 95% coverage, provided no bare spots larger than 16 square feet exist.

**TCEQ NOTICE OF INTENT
(NOI)**



TCEQ Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity under TPDES General Permit (TXR150000)

IMPORTANT:

- Use the [INSTRUCTIONS](#) to fill out each question in this form.
- Use the [CHECKLIST](#) to make certain you filled out all required information.
Incomplete applications **WILL** delay approval or result in denial.
- Once processed your permit can be viewed at: <http://www.tceq.texas.gov/goto/wq-dpa>

ePERMITS: Sign up now for online NOI: <https://www3.tceq.texas.gov/steers/>
Pay a \$225 reduced application fee by using ePermits.

APPLICATION FEE:

- You must pay the **\$325** Application Fee to TCEQ for the paper application to be complete.
- Payment and NOI must be mailed to separate addresses.
- Did you know you can pay on line?
 - Go to <http://www.tceq.texas.gov/goto/epay>
 - Select Fee Type: GENERAL PERMIT CONSTRUCTION STORM WATER DISCHARGE NOI APPLICATION
- **Provide your payment information below, for verification of payment:**

Mailed Check/Money Order Number: _____
 Name Printed on Check: _____
 Copy of check enclosed? Yes

EPAY Voucher Number: _____
 Is the Payment Voucher copy attached? Yes

RENEWAL: Is this NOI a Renewal of an existing General Permit Authorization?
(Note: A permit cannot be renewed after June 3, 2013.)

Yes The Permit number is: TXR15_____

(If a permit number is not provided, a new number will be assigned.)

No

1) OPERATOR (Applicant)

- a)** If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? You may search for your CN at:
<http://www.tceq.texas.gov/goto/cr-customer>

CN _____

b) What is the Legal Name of the entity (applicant) applying for this permit?

(The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal document forming the entity.)

c) What is the contact information for the Operator (Responsible Authority)? The mailing address must be recognized by the US Postal Service (USPS). You may verify the address at: <https://tools.usps.com/go/ZipLookupAction!input.action>

Prefix (Mr. Ms. Miss): _____
First/Last Name: _____ Suffix: _____
Title: _____ Credential: _____
Phone Number: _____ Ext: _____ Fax Number: _____
E-mail: _____
Mailing Address: _____
Internal Routing (Mail Code, Etc.): _____
City: _____ State: _____ ZIP Code: _____
If outside USA:
Territory: _____ Country Code: _____ Postal Code: _____

d) Indicate the type of Customer (The instructions will help determine your customer type):

Individual	Limited Partnership	Sole Proprietorship-DBA
Joint Venture	General Partnership	Corporation
Trust	Estate	Federal Government
State Government	County Government	City Government
Other Government		

e) Independent Operator? (If governmental entity, subsidiary, or part of a larger corporation, check "No".)

Yes No

f) Number of Employees:

0-20; 21-100; 101-250; 251-500; or 501 or higher

g) Customer Business Tax and Filing Numbers:

(REQUIRED for Corporations and Limited Partnerships. Not Required for Individuals, Government, or Sole Proprietors)

State Franchise Tax ID Number: _____

Federal Tax ID: _____

Texas Secretary of State Charter (filing) Number: _____

DUNS Number (if known): _____

2) APPLICATION CONTACT

If TCEQ needs additional information regarding this application, who should be contacted?

Is the application contact the same as the applicant identified above?

Yes, go to Section 3).

No, complete section below

Prefix (Mr. Ms. Miss): _____
First/Last Name: _____ Suffix: _____
Title: _____ Credential: _____
Organization Name: _____
Phone Number: _____ Ext: _____ Fax Number: _____
E-mail: _____
Mailing Address: _____
Internal Routing (Mail Code, Etc.): _____
City: _____ State: _____ ZIP Code: _____
Mailing Information if outside USA:
Territory: _____ Country Code: _____ Postal Code: _____

3) REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

If the site of your business is part of a larger business site or if other businesses were located at this site before yours, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. Search TCEQ's Central Registry to see if the larger site may already be registered as a regulated site at:

<http://www.tceq.texas.gov/goto/cr-searchrn>

If the site is found, provide the assigned Regulated Entity Reference Number and provide the information for the site to be authorized through this application below. The site information for this authorization may vary from the larger site information.

a) TCEQ issued RE Reference Number (RN): RN _____

b) Name of project or site (the name known by the community where located):

c) In your own words, briefly describe the primary business of the Regulated Entity: (Do not repeat the SIC and NAICS code):

d) County (or counties if > 1)

e) Latitude: _____ Longitude: _____

f) Does the site have a physical address?

Yes, complete Section A for a physical address.

No, complete section B for site location information.

Section A: Enter the physical address for the site.

Verify the address with USPS. If the address is not recognized as a delivery address, provide the address as identified for overnight mail delivery, 911 emergency or other online map tools to confirm an address.

Physical Address of Project or Site:

Street Number: _____ Street Name: _____
City: _____ State: _____ ZIP Code: _____

Section B: Enter the site location information.

If no physical address (Street Number & Street Name), provide a written location access description to the site. (Example: located 2 miles west from intersection of Hwy 290 & IH35 accessible on Hwy 290 South)

City where the site is located or, if not in a city, what is the nearest city:

State: _____ ZIP Code where the site is located: _____

4) GENERAL CHARACTERISTICS

a) Is the project/site located on Indian Country Lands?

Yes - If the answer is Yes, you must obtain authorization through EPA, Region 6.

No

b) Is your construction activity associated with a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources?

Yes - If the answer is Yes, you may be under jurisdiction of the Railroad Commission of Texas and may need to obtain authorization through EPA, Region 6.

No

c) What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site?

Primary SIC Code: _____

d) If applicable, what is the Secondary SIC Code(s): _____

e) What is the total number of acres disturbed? _____

f) Is the project site part of a larger common plan of development or sale?

Yes - If the answer is Yes, the total number of acres disturbed can be less than 5 acres.

No - If the answer is No, the total number of acres disturbed must be 5 or more. If the total number of acres disturbed is less than 5 then the project site does not qualify for coverage through this Notice of Intent. Coverage will be denied. See the requirements in the general permit for small construction sites.

g) What is the name of the first water body(s) to receive the stormwater runoff or potential runoff from the site?

h) What is the segment number(s) of the classified water body(s) that the discharge will eventually reach?

i) Is the discharge into an MS4?

Yes - If the answer is Yes, provide the name of the MS4 operator below.

Note: The general permit requires you to send a copy of the NOI to the MS4 operator.

No

j) Are any of the surface water bodies receiving discharges from the construction site on the latest EPA-approved CWA 303(d) List of impaired waters?

Yes - If the answer is Yes, provide the name(s) of the impaired water body(s) below.

No

k) Is the discharge or potential discharge within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer as defined in 30 TAC Chapter 213?

Yes - If the answer is Yes, complete certification below by checking "Yes."

No

I certify that a copy of the TCEQ approved Plan required by the Edwards Aquifer Rule (30 TAC Chapter 213) is either included or referenced in the Stormwater Pollution Prevention Plan.

Yes

5) CERTIFICATION

Check Yes to the certifications below. Failure to indicate Yes to **ALL** items may result in denial of coverage under the general permit.

- a) I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000). Yes
- b) I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas. Yes
- c) I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed. Yes
- d) I certify that a Stormwater Pollution Prevention Plan has been developed, will be implemented prior to construction and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the general permit TXR150000. Note: For multiple operators who operate under a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator. Yes

Operator Certification:

I, _____
Typed or printed name Title

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under **30 Texas Administrative Code §305.44** to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signature: _____ Date: _____
(Use blue ink)

NOTICE OF INTENT CHECKLIST (TXR150000)

- Did you complete everything? Use this checklist to be sure!
- Are you ready to mail your form to TCEQ? Go to the General Information Section of the Instructions for mailing addresses.

This checklist is for use by the operator to ensure a complete application. Missing information may result in denial of coverage under the general permit. (See NOI process description in the Instructions)

Application Fee:

If paying by Check:

Check was mailed **separately** to the TCEQs Cashier's Office. (See Instructions for Cashier's address and Application address.)

Check number and name on check is provided in this application.

If using ePay:

The voucher number is provided in this application or a copy of the voucher is attached.

PERMIT NUMBER:

Permit number provided – if this application is for renewal of an existing authorization.

OPERATOR INFORMATION - Confirm each item is complete:

Customer Number (CN) issued by TCEQ Central Registry

Legal name as filed to do business in Texas (Call TX SOS 512/463-5555)

Name and title of responsible authority signing the application

Mailing address is complete & verifiable with USPS. www.usps.com

Phone numbers/e-mail address

Type of operator (entity type)

Independent operator

Number of employees

For corporations or limited partnerships – Tax ID and SOS filing numbers

Application contact and address is complete & verifiable with USPS. <http://www.usps.com>

REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE - Confirm each item is complete:

Regulated Entity Reference Number (RN) (if site is already regulated by TCEQ)

Site/project name/regulated entity

Latitude and longitude <http://www.tceq.texas.gov/gis/sqmaview.html>

County

Site/project physical address. Do not use a rural route or post office box.

Business description

GENERAL CHARACTERISTICS - Confirm each item is complete:

Indian Country Lands –the facility is not on Indian Country Lands

Construction activity related to facility associated to oil, gas, or geothermal resources

Standard Industrial Classification (SIC) Code www.osha.gov/oshstats/sicser.html

Acres disturbed is provided and qualifies for coverage through a NOI

Common plan of development or sale

Receiving water body(s)

Segment number(s)

Impaired water body(s)

MS4 operator

Edwards Aquifer rule

CERTIFICATION

Certification statements have been checked indicating “Yes”

Signature meets 30 Texas Administrative Code (TAC) 305.44 and is original.

Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity under TPDES General Permit (TXR150000)

General Information and Instructions

GENERAL INFORMATION

Where to Send the Notice of Intent (NOI):

BY REGULAR U.S. MAIL

Texas Commission on Environmental Quality
Stormwater Processing Center (MC-228)
P.O. Box 13087
Austin, Texas 78711-3087

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality
Stormwater Processing Center (MC-228)
12100 Park 35 Circle
Austin, TX 78753

TCEQ Contact List:

Application – status and form questions:

512/239-3700, swpermit@tceq.texas.gov

Technical questions:

512/239-4671, swgp@tceq.texas.gov

Environmental Law Division:

512/239-0600

Records Management - obtain copies of forms:

512/239-0900

Reports from databases (as available):

512/239-DATA (3282)

Cashier's office:

512/239-0357 or 512/239-0187

Notice of Intent Process:

When your NOI is received by the program, the form will be processed as follows:

- 1) **Administrative Review:** Each item on the form will be reviewed for a complete response. In addition, the operator's legal name must be verified with Texas Secretary of State as valid and active (if applicable). The address(s) on the form must be verified with the US Postal service as receiving regular mail delivery. Never give an overnight/express mailing address.
- 2) **Notice of Deficiency:** If an item is incomplete or not verifiable as indicated above, a notice of deficiency (NOD) will be mailed to the operator. The operator will have 30 days to respond to the NOD. The response will be reviewed for completeness.
- 3) **Acknowledgment of Coverage:** An Acknowledgment Certificate will be mailed to the operator. This certificate acknowledges coverage under the general permit.
-or-
Denial of Coverage: If the operator fails to respond to the NOD or the response is inadequate, coverage under the general permit may be denied. If coverage is denied, the operator will be notified.

General Permit (Your Permit)

For NOIs submitted **electronically** through ePermits, provisional coverage under the general permit begins immediately following confirmation of receipt of the NOI form by the TCEQ.

For **paper** NOIs, provisional coverage under the general permit begins **7 days after a completed NOI is postmarked for delivery** to the TCEQ.

You should have a copy of your general permit when submitting your application. You may view and print your permit for which you are seeking coverage, on the TCEQ web site <http://www.tceq.texas.gov>. Search using key word TXR150000.

General Permit Forms

The Notice of Intent (NOI), Notice of Termination (NOT), and Notice of Change (NOC) (including instructions) are available in Adobe Acrobat PDF format on the TCEQ web site <http://www.tceq.texas.gov>.

Change in Operator

An authorization under the general permit is not transferable. If the operator of the regulated entity changes, the present permittee must submit a Notice of Termination and the new operator must submit a Notice of Intent. The NOT and NOI must be submitted no later than 10 days prior to the change in Operator status.

TCEQ Central Registry Core Data Form

The Core Data Form has been incorporated into this form. Do not send a Core Data Form to TCEQ. After final acknowledgment of coverage under the general permit, the program will assign a Customer Number and Regulated Entity Number.

You can find the information on the Central Registry web site at <http://www15.tceq.texas.gov/crpub/>. You can search by the Regulated Entity (RN), Customer Number (CN) or Name (Permittee), or by your permit number under the search field labeled "Program ID". Capitalize all letters in the permit number.

The Customer (Permittee) is responsible for providing consistent information to the TCEQ, and for updating all CN and RN data for all authorizations as changes occur. For General Permits, a Notice of Change form must be submitted to the program area.

Fees associated with a General Permit

Payment of the fee may be made by check or money order, payable to TCEQ, or through EPAY (electronic payment through the web).

Application Fee: This fee is required to be paid at the time the NOI is submitted. Failure to submit payment at the time the application is filed will cause delays in acknowledgment or denial of coverage under the general permit.

Mailed Payments:

Payment must be mailed under separate cover at one of the addresses below using the attached Application Fee submittal form. (DO NOT SEND A COPY OF THE NOI WITH THE APPLICATION FEE SUBMITTAL FORM)

BY REGULAR U.S. MAIL
Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, Texas 78711-3088

BY OVERNIGHT/EXPRESS MAIL
Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, TX 78753

ePAY Electronic Payment: <http://www.tceq.texas.gov/epay>

When making the payment you must select Water Quality, and then select the fee category "General Permit Construction Storm Water Discharge NOI Application". You must include a copy of the payment voucher with your NOI. Your NOI will not be considered complete without the payment voucher.

INSTRUCTIONS FOR FILLING OUT THE NOI FORM

Renewal of General Permit. Dischargers holding active authorizations under the expired General Permit are required to submit a NOI to continue coverage. The existing permit number is required. If the permit number is not provided or has been terminated, expired, or denied a new permit number will be issued.

1. Operator (Applicant)

a) Enter assigned Customer Number (CN)

TCEQ's Central Registry will assign each customer a number that begins with CN, followed by nine digits. **This is not a permit number, registration number, or license number.**

If this customer has not been assigned a CN, leave the space for the CN blank.

If this customer has already been assigned this number, enter the permittee's CN.

b) Legal Name

Provide the current legal name of the permittee, as authorized to do business in Texas. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, that is filed in the county where doing business. You may contact the SOS at 512/463-5555, for more information related to filing in Texas. If filed in the county where doing business, provide a copy of the legal documents showing the legal name.

c) Operator Contact's (Responsible Authority) Contact Information and Mailing Address

Provide the first and last name, and the title of the person signing the Certification section of the application. This person must be an individual having signatory authority in accordance with 30 TAC Chapter §305.44. This person is also referred to as the Responsible Authority.

Provide a complete mailing address for receiving mail from the TCEQ. The address must be verifiable with the US Postal Service at

<https://tools.usps.com/go/ZipLookupAction!input.action> for regular mail delivery (not overnight express mail). If you find that the address is not verifiable using the USPS web search, please indicate the address is used by the USPS for regular mail delivery.

The area code and phone number should provide contact to the operator. Leave Extension blank if not applicable.

The fax number and e-mail address are optional and should correspond to the operator.

d) Type of Customer (Entity Type)

Check only one box that identifies the type of entity. Use the descriptions below to identify the appropriate entity type. Note that the selected entity type also indicates the name that must be provided as an applicant for a permit, registration or authorization.

Sole Proprietorship – DBA

A sole proprietorship is a customer that is owned by only one person and has not been incorporated. This business may:

- be under the person's name
- have its own name (doing business as or d.b.a.)
- have any number of employees

If the customer is a Sole Proprietorship or DBA, the 'legal name' of the individual business 'owner' must be provided. The DBA name is not recognized as the 'legal name' of the entity. The DBA name may be used for the site name (regulated entity).

Individual

An individual is a customer who has not established a business, but conducts an activity that needs to be regulated by the TCEQ.

Partnership

- A customer that is established as a partnership as defined by the Texas Secretary of State Office (TX SOS). A Limited Partnership or Limited Liability Partnership (Partnership) is required to file with the Texas Secretary of State. A General Partnership or Joint Venture is not required to register with the state.
- **Partnership (Limited Partnership or Limited Liability Partnership):** A limited partnership is defined in the Act as a partnership formed by two or more persons under the provisions of Section 3 of the Uniform Limited Partnership Act (Art. 6132a, Revised Civil Statutes of Texas) and having as members one or more general partners and one or more limited partners. The limited partners as such are not bound by the obligations of the partnership. Limited partners may not take part in the day-to-day operations of the business. A Limited Partnership must file with the Texas Secretary of State. A registered limited liability partnership is a general or limited partnership that is registered with the Texas Secretary of State. The partnership's name must contain the words "Registered Limited Liability Partnership" or the abbreviation "L.L.P." as the last words or letters of its name.
- **General Partnership:** A general partner may or may not invest, participates in running the partnership and is liable for all acts and debts of the partnership and any member of it. A General Partnership does not have limited partners. For a General Partnership, there is no registration with the state or even written agreement necessary for a general partnership to be formed. The legal definition of a partnership is generally stated as "an association of two or more persons to carry on as co-owners a business for profit" (Revised Uniform Partnership Act § 101 [1994]).
- **Joint Venture:** A joint venture is but another name for a special partnership. It might be distinguished from a general partnership in that the latter is formed for the transaction of a general business, while a joint venture is usually limited to a single transaction. That is, a joint venture is a special combination of persons in the nature of a partnership engaged in the joint prosecution of a particular transaction for mutual benefit or profit.

Corporation

A customer meets all of these conditions:

- is a legally incorporated entity under the laws of any state or country
- is recognized as a corporation by the Texas Secretary of State
- has proper operating authority to operate in Texas.
- The corporation's 'legal name' as filed with the Texas Secretary of State must be provided as applicant. An 'assumed' name of a corporation is not recognized as the 'legal name' of the entity.

Government

Federal, state, county, or city government (as appropriate)

The customer is either an agency of one of these levels of government or the governmental body itself. The government agency's 'legal name' must be provided as the

applicant. A department name or other description of the organization should not be included as a part of the 'legal name' as applicant.

Trust or Estate

A trust and an estate are fiduciary relationships governing the trustee/executor with respect to the trust/estate property.

Other Government

A utility district, water district, tribal government, college district, council of governments, or river authority. Write in the specific type of government.

e) Independent Entity

Check No if this customer is a subsidiary, part of a larger company, or is a governmental entity. Otherwise, check Yes.

f) Number of Employees

Check one box to show the number of employees for this customer's entire company, at all locations. This is not necessarily the number of employees at the site named in the application.

g) Customer Business Tax and Filing Numbers

These are required for Corporations and Limited Partnerships. These are not required for Individuals, Government, and Sole Proprietors.

State Franchise Tax ID Number

Corporations and limited liability companies that operate in Texas are issued a franchise tax identification number. If this customer is a corporation or limited liability company, enter this number here.

Federal Tax ID

All businesses, except for some small sole proprietors, individuals, or general partnerships should have a federal taxpayer identification number (TIN). Enter this number here. Use no prefixes, dashes, or hyphens. Sole proprietors, individuals, or general partnerships do not need to provide a federal tax ID.

TX SOS Charter (filing) Number

Corporations and Limited Partnerships required to register with the Texas Secretary of State are issued a charter or filing number. You may obtain further information by calling SOS at 512/463-5555.

DUNS Number

Most businesses have a DUNS (Data Universal Numbering System) number issued by Dun and Bradstreet Corp. If this customer has one, enter it here.

2. APPLICATION CONTACT

Provide the name, title and communication information of the person that TCEQ can contact for additional information regarding this application.

3. REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

a) Regulated Entity Reference Number (RN)

A number issued by TCEQ's Central Registry to sites (a location where a regulated activity occurs) regulated by TCEQ. This is not a permit number, registration number, or license number. If this regulated entity has not been assigned an RN, leave this space blank.

If the site of your business is part of a larger business site, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. Search TCEQ's Central Registry to see if the larger site may already be registered as a regulated site at: <http://www.tceq.texas.gov/goto/cr-searchrn>

If the site is found, provide the assigned Regulated Entity Reference Number (RN) and provide the information for the site to be authorized through this application. The site information for this authorization may vary from the larger site information.

An example is a chemical plant where a unit is owned or operated by a separate corporation that is accessible by the same physical address of your unit or facility. Other examples include industrial parks identified by one common address but different corporations have control of defined areas within the site. In both cases, an RN would be assigned for the physical address location and the permitted sites would be identified separately under the same RN.

b) Site/Project Name/Regulated Entity

Provide the name of the site as known by the public in the area where the site is located. The name you provide on this application will be used in the TCEQ Central Registry as the Regulated Entity name.

c) Description of Activity Regulated

In your own words, briefly describe the primary business that you are doing that requires this authorization. Do not repeat the SIC Code description.

d) County

Identify the county or counties in which the regulated entity is located.

e) Latitude and Longitude

Enter the latitude and longitude of the site in degrees, minutes, and seconds or decimal form. For help obtaining the latitude and longitude, go to:

<http://www.tceq.texas.gov/gis/sqmapview.html> or <http://nationalmap.gov/ustopo>

f) Site/Project (RE) Physical Address/Location Information

Enter the complete address for the site in Section A if the address can be validated through the US Postal Service. If the physical address is not recognized as a USPS delivery address, you may need to validate the address with your local police (911 service) or through an online map site used to locate a site. Please confirm this to be a complete and valid address. Do not use a rural route or post office box for a site location.

If a site does not have an address that includes a street (or house) number and street name, enter NO ADDRESS for the street name in Section A. In Section B provide a complete written location description. For example: "The site is located 2 miles west from intersection of Hwy 290 & IH35, located on the southwest corner of the Hwy 290 South bound lane." Provide the city (or nearest city) and zip code of the facility location.

4. GENERAL CHARACTERISTICS

a) Indian Country Lands

If your site is located on Indian Country Lands, the TCEQ does not have authority to process your application. You must obtain authorization through EPA, Region 6, Dallas. Do not submit this form to TCEQ.

b) Construction activity associated with facility associated with exploration, development, or production of oil, gas, or geothermal resources

If your activity is associated with oil and gas exploration, development, or production, you may be under jurisdiction of the Railroad Commission of Texas and may need to obtain authorization from EPA Region 6. For more information, see:

[http://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=30](http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=30)

Construction activities associated with a facility related to oil, gas or geothermal resources may include the construction of a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel.

Where required by federal law, discharges of stormwater associated with construction activities under the Railroad Commission's jurisdiction must be authorized by the EPA and the Railroad Commission of Texas, as applicable. Activities under Railroad Commission of Texas jurisdiction include construction of a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources, such as a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility under the jurisdiction of the Railroad Commission of Texas; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel. The Railroad Commission of Texas also has jurisdiction over stormwater from land disturbance associated with a site survey that is conducted prior to construction of a facility that would be regulated by the Railroad Commission of Texas. Under 33 U.S.C. §1342(l)(2) and §1362(24), EPA cannot require a permit for discharges of stormwater from "field activities or operations associated with {oil and gas} exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities" unless the discharge is contaminated by contact with any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the facility. Under §3.8 of this title (relating to Water Protection), the Railroad Commission of Texas prohibits operators from causing or allowing pollution of surface or subsurface water. Operators are encouraged to implement and maintain best management practices (BMPs) to minimize discharges of pollutants, including sediment, in stormwater during construction activities to help ensure protection of surface water quality during storm events.

c) Primary Standard Industrial Classification (SIC) Code

Provide the SIC Code that best describes the construction activity being conducted at this site.

Common SIC Codes related to construction activities include:

- 1521 - Construction of Single Family Homes
- 1522 - Construction of Residential Bldgs. Other than Single Family Homes
- 1541 - Construction of Industrial Bldgs. and Warehouses

- 1542 - Construction of Non-residential Bldgs, other than Industrial Bldgs. and Warehouses
- 1611 - Highway and Street Construction, except Highway Construction
- 1622 - Bridge, Tunnel, and Elevated Highway Construction
- 1623 - Water, Sewer, Pipeline and Communications, and Power Line Construction

For help with SIC Codes, go to:

<http://www.osha.gov/pls/imis/sicsearch.html>

d) Secondary SIC Code

Secondary SIC Code(s) may be provided. Leave blank if not applicable. For help with SIC Codes, go to: <http://www.osha.gov/pls/imis/sicsearch.html>

e) Total Number of Acres Disturbed

Provide the approximate number of acres that the construction site will disturb. Construction activities that disturb less than one acre, unless they are part of a larger common plan that disturbs more than one acre, do not require permit coverage. Construction activities that disturb between one and five acres, unless they are part of a common plan that disturbs more than five acres, do not require submission of an NOI. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

If you have any questions about this item, please contact the stormwater technical staff by phone at (512)239-4671 or by email at swgp@tceq.texas.gov.

f) Common Plan of Development

Construction activities that disturb less than five acres do not require submission of an NOI unless they are part of a common plan of development or for sale where the area disturbed is five or more acres. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

For more information on "What is a common plan of development?" go to:

www.tceq.texas.gov/permitting/stormwater/common_plan_of_development_steps.html

For further information, go to the TCEQ stormwater construction webpage at:

www.tceq.texas.gov/goto/construction and search for "Additional Guidance and Quick Links". If you have any further questions about this item, please call the stormwater technical staff at (512)239-4671.

g) Identify the water body(s) receiving stormwater runoff

The stormwater may be discharged directly to a receiving stream or through a MS4 from your site. It eventually reaches a receiving water body such as a local stream or lake, possibly via a drainage ditch. You must provide the name of the water body that receives the discharge from the site (a local stream or lake).

If your site has more than one outfall you need to include the name of the first water body for each outfall, if they are different.

h) Identify the segment number(s) of the classified water body(s)

Identify the classified segment number(s) receiving a discharge directly or indirectly. Go to the following link to find the segment number of the classified water body where stormwater will flow from the site: www.tceq.texas.gov/waterquality/monitoring/viewer.html

You may also find the segment number in TCEQ publication GI-316:

www.tceq.texas.gov/publications/gi/gi-316

If the discharge is into an unclassified receiving water and then crosses state lines prior to entering a classified segment, select the appropriate watershed:

- 0100 (Canadian River Basin)
- 0200 (Red River Basin)
- 0300 (Sulfur River Basin)
- 0400 (Cypress Creek Basin)
- 0500 (Sabine River Basin)

Call the Water Quality Assessments section at (512)239-4671 for further assistance.

i) Discharge into MS4 – Identify the MS4 Operator

The discharge may initially be into a municipal separate storm sewer system (MS4). If the stormwater discharge is into an MS4, provide the name of the entity that operates the MS4 where the stormwater discharges. An MS4 operator is often a city, town, county, or utility district, but possibly can be another form of government. Please note that the Construction General Permit requires the Operator to supply the MS4 with a copy of the NOI submitted to TCEQ. For assistance, you may call the technical staff at (512)239-4671.

j) Surface Water bodies on list of impaired waters – Identify the impaired water body(s)

Indicate Yes or No if any surface water bodies receiving discharges from the construction site are on the latest EPA-approved CWA 303(d) List of impaired waters. Provide the name(s) of surface water bodies receiving discharges or potential discharges from the construction site that are on the latest EPA-approved CWA 303(d) List of impaired waters. The EPA-approved CWA 303(d) List of impaired waters in Texas can be found at:

www.tceq.texas.gov/waterquality/assessment/305_303.html

NOTE: Do not use any "draft" documents.

k) Discharges to the Edwards Aquifer Recharge Zone and Certification

See maps on the TCEQ website to determine if the site is located within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer at: www.tceq.texas.gov/field/eapp/viewer.html

If the discharge or potential discharge is within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, a site specific authorization approved by the Executive Director under the Edwards Aquifer Protection Program (30 TAC Chapter 213) is required before construction can begin. The certification must be answered "Yes" for coverage under the Construction General Permit. The TCEQ approved plan must be readily available for TCEQ staff to review at the time that the NOI is submitted.

The general permit requires the approved Contributing Zone Plan or Water Pollution Abatement Plan to be included or referenced as a part of the Stormwater Pollution Prevention Plan.

For questions regarding the Edwards Aquifer Protection Program, contact the appropriate TCEQ Regional Office. For projects in Hays, Travis and Williamson Counties: Austin Regional Office, 12100 Park 35 Circle, Austin, TX 78753, 512-339-2929. For Projects in Bexar, Comal, Kinney, Medina and Uvalde Counties: TCEQ San Antonio Regional Office, 14250 Judson Rd., San Antonio, TX 78233-4480, 210-490-3096.

5. CERTIFICATIONS

Failure to indicate **Yes** to ALL of the certification items may result in denial of coverage under the general permit.

a) Certification of Understanding the Terms and Conditions of Construction General Permit (TXR150000)

Provisional coverage under the Construction General Permit (TXR150000) begins 7 days after the completed paper NOI is postmarked for delivery to the TCEQ. (Electronic applications submitted through ePermits have immediate provisional coverage). You must obtain a copy and read the Construction General Permit before submitting your application. You may view and print the Construction General Permit for which you are seeking coverage at the TCEQ web site: www.tceq.texas.gov/goto/construction

b) Certification of Legal Name

The full legal name of the applicant as authorized to do business in Texas is required. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, that is filed in the county where doing business. You may contact the SOS at (512)463 5555, for more information related to filing in Texas.

c) Understanding of Notice of Termination

A permittee shall terminate coverage under this Construction General Permit through the submittal of a NOT when the operator of the facility changes, final stabilization has been reached, the discharge becomes authorized under an individual permit, or the construction activity never began at this site.

d) Certification of Stormwater Pollution Prevention Plan

The SWP3 identifies the areas and activities that could produce contaminated runoff at your site and then tells how you will ensure that this contamination is mitigated. For example, in describing your mitigation measures, your site's plan might identify the devices that collect and filter stormwater, tell how those devices are to be maintained, and tell how frequently that maintenance is to be carried out. You must develop this plan in accordance with the TCEQ general permit requirements. This plan must be developed and implemented before you complete this NOI. The SWP3 must be available for a TCEQ investigator to review on request.

Operator Certification:

The certification must bear an original signature of a person meeting the signatory requirements specified under 30 Texas Administrative Code (TAC) §305.44.

IF YOU ARE A CORPORATION:

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(1) (see below). According to this code provision, any corporate representative may sign an NOI or similar form so long as the authority to sign such a document has been delegated to that person in accordance with corporate procedures. By signing the NOI or similar form, you are certifying that such authority has been delegated to you. The TCEQ may request documentation evidencing such authority.

IF YOU ARE A MUNICIPALITY OR OTHER GOVERNMENT ENTITY:

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(3) (see below). According to this code provision, only a ranking elected official or principal executive officer may sign an NOI or similar form. Persons such as the City Mayor or County Commissioner will be considered ranking elected officials. In order to identify the principal executive officer of your government entity, it may be beneficial to consult your city charter, county or city ordinances, or the Texas statute(s) under which your government entity was formed. An NOI or similar document that is signed by a government official who is not a ranking elected official or principal executive officer does not conform to §305.44(a)(3). The signatory requirement may not be delegated to a government representative other than those identified in the regulation. By signing the NOI or similar form, you are certifying that you are either a ranking elected official or principal executive officer as required by the administrative code. Documentation demonstrating your position as a ranking elected official or principal executive officer may be requested by the TCEQ.

If you have any questions or need additional information concerning the signatory requirements discussed above, please contact the Texas Commission on Environmental Quality's Environmental Law Division at (512)239-0600.

30 Texas Administrative Code**§305.44. Signatories to Applications**

(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

Texas Commission on Environmental Quality General Permit Payment Submittal Form

Use this form to submit your Application Fee only if you are mailing your payment.

- Complete items 1 through 5 below:
- Staple your check in the space provided at the bottom of this document.
- Do not mail this form with your NOI form.
- Do not mail this form to the same address as your NOI.

Mail this form and your check to:

BY REGULAR U.S. MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, TX 78711-3088

BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, TX 78753

Fee Code: GPA	General Permit:	TXR150000
---------------	-----------------	-----------

1. Check / Money Order Number: _____
2. Amount of Check/Money Order: _____
3. Date of Check or Money Order: _____
4. Name on Check or Money Order: _____
5. NOI INFORMATION

If the check is for more than one NOI, list each Project/Site (RE) Name and Physical Address exactly as provided on the NOI. DO NOT SUBMIT A COPY OF THE NOI WITH THIS FORM AS IT COULD CAUSE DUPLICATE PERMIT ENTRIES.

See Attached List of Sites (If more space is needed, you may attach a list.)

Project/Site (RE) Name: _____

Project/Site (RE) Physical Address: _____

Staple Check in This Space

TCEQ AGENT OF AUTHORIZATION

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Bill Watts

Print Name
Owner _____

Title - Owner/President/Other
of 2i Sonoma Verde, L.P.

Corporation/Partnership/Entity Name
have authorized Stantec Consulting Services, Inc.

Print Name of Agent/Engineer
of Stantec Consulting Services, Inc.

Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to \$10,000 per day per violation.
2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.
3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.
4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.
5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:


Applicant's Signature

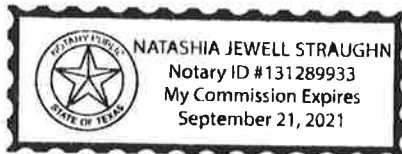
2-7-19
Date

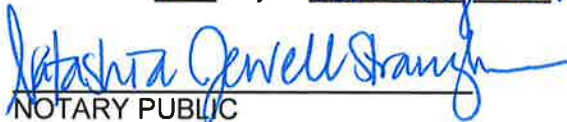
THE STATE OF Texas §

County of Bexar §

BEFORE ME, the undersigned authority, on this day personally appeared Bill Watts known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 7th day of February, 2019




NOTARY PUBLIC

Natasha Jewell Straughn
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: September 21, 2021

APPLICATION FEE FORM

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: 2i Sonoma Verde, L.P.

Regulated Entity Location: Vista Colina and Kyle Seale Parkway, Bexar County, TX

Name of Customer: Bill Watts

Contact Person: Bill Watts

Phone: (972)712-5606

Customer Reference Number (if issued):CN

Regulated Entity Reference Number (if issued):RN

Austin Regional Office (3373)

☐ Hays

☐ Travis

☐ Williamson

San Antonio Regional Office (3362)

☒ Bexar

☐ Medina

☐ Uvalde

☐ Comal

☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment.** This payment is being submitted to:

☐ Austin Regional Office

☒ San Antonio Regional Office

☐ Mailed to: TCEQ - Cashier

☐ Overnight Delivery to: TCEQ - Cashier

Revenues Section

12100 Park 35 Circle

Mail Code 214

Building A, 3rd Floor

P.O. Box 13088

Austin, TX 78753

Austin, TX 78711-3088

(512)239-0357

Site Location (Check All That Apply):

☐ Recharge Zone

☒ Contributing Zone

☐ Transition Zone

Type of Plan	Size	Fee Due
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	\$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	48.4 Acres	\$ 8,000
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: Ry Whittle

Date: 7/3/19

Application Fee Schedule

Texas Commission on Environmental Quality

Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

<i>Project</i>	<i>Project Area in Acres</i>	<i>Fee</i>
One Single Family Residential Dwelling	< 5	\$650
Multiple Single Family Residential and Parks	< 5	\$1,500
	5 < 10	\$3,000
	10 < 40	\$4,000
	40 < 100	\$6,500
	100 < 500	\$8,000
	≥ 500	\$10,000
Non-residential (Commercial, industrial, institutional, multi-family residential schools, and other sites where regulated activities will occur)	< 1	\$3,000
	1 < 5	\$4,000
	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$10,000

Organized Sewage Collection Systems and Modifications

<i>Project</i>	<i>Cost per Linear Foot</i>	<i>Minimum Fee- Maximum Fee</i>
Sewage Collection Systems	\$0.50	\$650 - \$6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

<i>Project</i>	<i>Cost per Tank or Piping System</i>	<i>Minimum Fee- Maximum Fee</i>
Underground and Aboveground Storage Tank Facility	\$650	\$650 - \$6,500

Exception Requests

<i>Project</i>	<i>Fee</i>
Exception Request	\$500

Extension of Time Requests

<i>Project</i>	<i>Fee</i>
Extension of Time Request	\$150

CORE DATA FORM



TCEQ Core Data Form

TCEQ Use Only

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)		<input type="checkbox"/> Other
2. Customer Reference Number (if issued)	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number (if issued)
CN		RN

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	02/18/2019	
<input checked="" type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership			
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)			
The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).			
6. Customer Legal Name (If an individual, print last name first: e.g.: Doe, John)		If new Customer, enter previous Customer below:	
2i Sonoma Verde, L.P.			
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
802862562		82-3518263	
11. Type of Customer:	<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input checked="" type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Other:	
12. Number of Employees	13. Independently Owned and Operated?		
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
14. Customer Role (Proposed or Actual) - as it relates to the Regulated Entity listed on this form. Please check one of the following:			
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator			
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other:			
15. Mailing Address:	10140 Tisbury Drive		
	City	State	ZIP
	Frisco	TX	75035
16. Country Mailing Information (if outside USA)		17. E-Mail Address (if applicable)	
		bill@mrcteam.com	
18. Telephone Number	19. Extension or Code	20. Fax Number (if applicable)	
(972) 712 - 5606		() -	

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If "New Regulated Entity" is selected below this form should be accompanied by a permit application)
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information
The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)
48-Acre Sonoma Verde Multi Family Tract

23. Street Address of the Regulated Entity: (No PO Boxes)								
	City		State		ZIP		ZIP + 4	
24. County								

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	Northwest of the intersection of Vista Colina and Kyle Seale Pkwy								
26. Nearest City	San Antonio				State	TX		Nearest ZIP Code	
27. Latitude (N) In Decimal:	29.612342			28. Longitude (W) In Decimal:	-98.649148				
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds				
29	36	44.3	98	38	56.9				
29. Primary SIC Code (4 digits)	1522		30. Secondary SIC Code (4 digits)			31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)		
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.) Multi Family Development									
34. Mailing Address:	10140 Tisbury Drive								
	City	Frisco	State	TX	ZIP	75035	ZIP + 4		
35. E-Mail Address:	bill@mrcteam.com								
36. Telephone Number			37. Extension or Code			38. Fax Number (if applicable)			
(972) 712 - 5606						() -			

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
		CZP		
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

SECTION IV: Preparer Information

40. Name:	Ryan Whittle, PE		41. Title:	Professional Engineer
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address	
(210) 525 - 9090		(210) 525 - 0529	Ryan.Whittle@stantec.com	

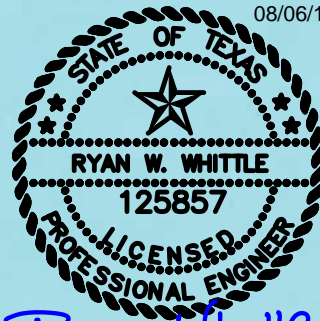
SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Stantec Consulting Services, LLC	Job Title:	Civil Engineer
Name (In Print):	Ryan Whittle, P.E.	Phone:	(210) 525 - 9090
Signature:		Date:	3/15/19

POLLUTANT LOAD

08/06/19



Ryan Whittle

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project:

Calculations from RG-348

Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:

$L_{M \text{ TOTAL PROJECT}}$ = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County = Bexar
Total project area included in plan * = 48.38 acres
Predevelopment impervious area within the limits of the plan * = 0.00 acres
Total post-development impervious area within the limits of the plan * = 23.45 acres
Total post-development impervious cover fraction * = 0.48
 P = 30 inches

$L_{M \text{ TOTAL PROJECT}}$ = 19135 lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 4

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = A

Total drainage basin/outfall area = 18.93 acres
Predevelopment impervious area within drainage basin/outfall area = 0.00 acres
Post-development impervious area within drainage basin/outfall area = 7.28 acres
Post-development impervious fraction within drainage basin/outfall area = 0.38
 $L_{M \text{ THIS BASIN}}$ = 5940 lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =
Batch Detention Proposed BMP =
Removal efficiency = 91 percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where:

A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C = 18.93 acres
 A_i = 7.28 acres
 A_p = 11.65 acres
 L_R = 7048 lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M \text{ THIS BASIN}}$ = 5940 lbs.

F = 0.84

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.

Calculations from RG-348

Pages 3-34 to 3-36

Rainfall Depth = 1.26 inches
Post Development Runoff Coefficient = 0.30
On-site Water Quality Volume = 25931 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 2.91 acres
Off-site Impervious cover draining to BMP = 0.00 acres
Impervious fraction of off-site area = 0.00
Off-site Runoff Coefficient = 0.02
Off-site Water Quality Volume = 266 cubic feet

Storage for Sediment = 5239
Total Capture Volume (required water quality volume(s) x 1.20) = 31437 cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where: $L_{M \text{ TOTAL PROJECT}}$ = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
 P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
County = Bexar
Total project area included in plan * = 48.38 acres
Predevelopment impervious area within the limits of the plan * = 0.00 acres
Total post-development impervious area within the limits of the plan * = 23.45 acres
Total post-development impervious cover fraction * = 0.48
 P = 30 inches

$L_{M \text{ TOTAL PROJECT}}$ = 19135 lbs.

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 4

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = B
Total drainage basin/outfall area = 16.99 acres
Predevelopment impervious area within drainage basin/outfall area = 0.00 acres
Post-development impervious area within drainage basin/outfall area = 11.04 acres
Post-development impervious fraction within drainage basin/outfall area = 0.65
 $L_{M \text{ THIS BASIN}}$ = 9009 lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =
Batch Detention Basin
Removal efficiency = 91 percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: $L_R = (\text{BMP efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where: A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP
 A_C = 16.99 acres
 A_i = 11.04 acres
 A_p = 5.95 acres
 L_R = 10516 lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M \text{ THIS BASIN}}$ = 9564 lbs.
 F = 0.91

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = 1.80 inches
Post Development Runoff Coefficient = 0.46
On-site Water Quality Volume = 50994 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 2.91 acres
Off-site Impervious cover draining to BMP = 0.00 acres
Impervious fraction of off-site area = 0.00
Off-site Runoff Coefficient = 0.02
Off-site Water Quality Volume = 380 cubic feet

Storage for Sediment = 10275
Total Capture Volume (required water quality volume(s) x 1.20) = 61649 cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: Sonoma Verde - San Antonio, TX
Date Prepared: 2/18/2019

1. The Required Load Reduction for the total project:

Calculations from RG-348
Page 3-29

Pages 3-27 to 3-30
Equation 3.3: $L_M = 27.2(A_N \times P)$

L_M = Required TSS removal resulting from the proposed development = 80% of increased load
 A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Bexar	
Total project area included in plan *	2.470	acres
Predevelopment impervious area within the limits of the plan *	0.000	acres
Total post-development impervious area within the limits of the plan *	1.640	acres
Total post-development impervious cover fraction *	0.66	
P =	30	inches
L_M TOTAL PROJECT =	1338	lbs.
Number of drainage basins / outfalls areas leaving the plan area =	6	

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = BayFilter 1 for DA-4

Total drainage basin/outfall area =	2.470	acres
Predevelopment impervious area within drainage basin/outfall area =	0.000	acres
Post-development impervious area within drainage basin/outfall area =	1.640	acres
Post-development impervious fraction within drainage basin/outfall area =	0.66	
L_M THIS BASIN =	1338	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	BayFilter	
Removal efficiency =	87	percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
 $LR = (BMP \text{ efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

A_C = Total On-Site drainage area in the BMP catchment area
 A_i = Impervious area proposed in the BMP catchment area
 A_p = Pervious area remaining in the BMP catchment area
 L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	2.470	acres
A_i =	1.640	acres
A_p =	0.830	acres
L_R =	1493	lbs.

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired L_M THIS BASIN =	1338	lbs.
F =	0.90	

6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.

Calculations from RG-348
Pages Section 3.4.14

Offsite area draining to BMP =	0.000	acres
Offsite impervious cover draining to BMP =	0.000	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.00	

Rainfall Depth =	1.70	inches
Rainfall Intensity =	1.10	inches per hour
Post Development Runoff Coefficient =	0.47	

Effective Area =	1.50	acres
Peak Flow =	1.65	cubic feet per second
On-site Water Quality Volume =	7190	cubic feet
Off-site Water Quality Volume =	0	cubic feet
Total Water Quality Volume (Calculated + 20%)	8628	

7. BayFilter

Designed as Required in RG-348
Section 3.4.14

Cartridge model =	BF545	
Cartridge Surface Loading Rate =	0.5	GPM per ft ²
Cartridge Capacity =	45.00	GPM
Cartridge head =	30.00	inches
Cartridge diameter =	30.00	inches
Manifold diameter =	6.00	inches

Option 1. Volume Design

Number of Cartridges for Volume-Based Configuration =	4	
Storage Volume for Volume-Based Configuration =	8628	cubic feet

Option 2. Flow Through Design

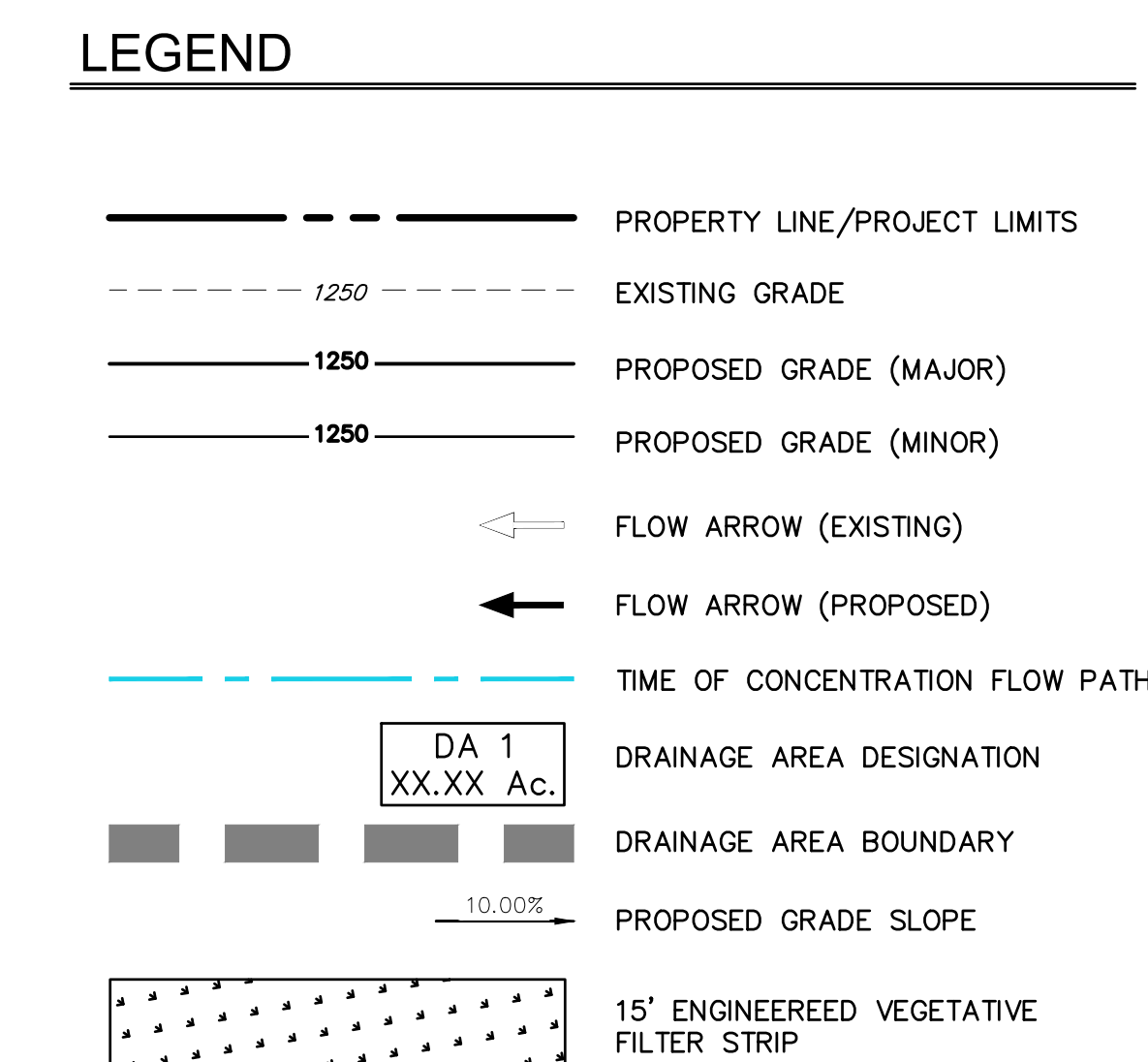
Flow Rate for Flow-Through Configuration =	1.65	cubic feet per second
Number of Cartridges for Flow-Through Configuration =	17	
Volume for Flow-Through Configuration =	0	cubic feet

Option 3. BayFilter w/Equalization Design

Minimum number of Cartridges Required =	4	
Flow Rate for Flow-Through Configuration w/ Equalization =	1.50	cubic feet per second
Number of Cartridges for Flow-Through Configuration w/ Equalization =	15	
Minimum Required Equalization Storage (Calculated Volume +20%) =	120	cubic feet

BayFilter 1					
Vault Volume		Filter Subtraction	545	Pipe Diameter	6
Vault Area	128	# of Filters	15	Length of Pipe	40
Weir Height	2.83	Vol Per Filter	-8.2	Area of Pipe	-0.196
Vault Volume	362.24	Filter Volume	-123.00	Pipe Volume	-7.85
		Vault Volume	231		

EXHIBITS

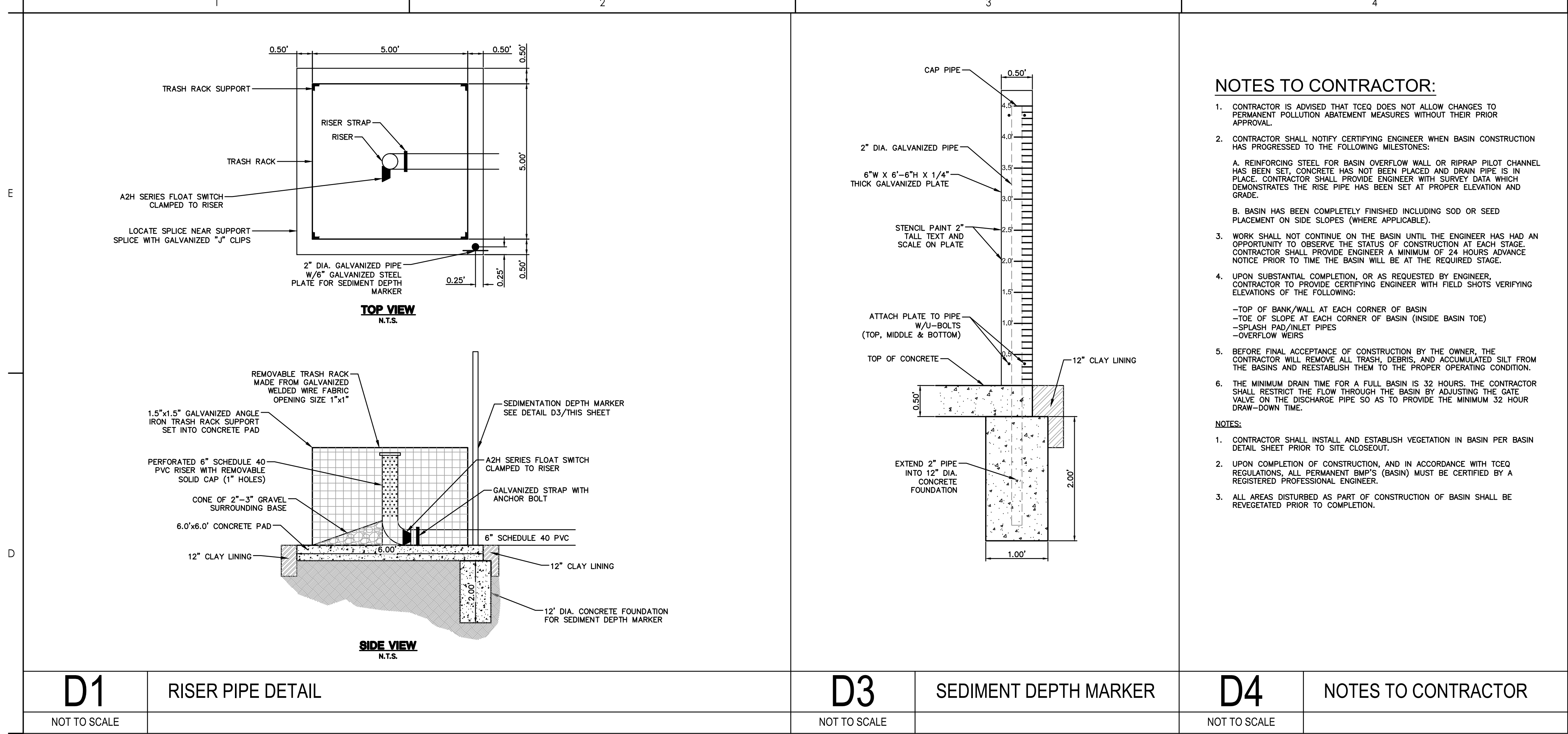


PBMP SUMMARY				
PBMP	PBMP TYPE	DRAINAGE AREAS	OVERTREATED AREAS	Lm TREATED (lbs)
A	BATCH DETENTION	DA-1	OT-3	5,940
B	BATCH DETENTION	DA-2	OT-1, OT-2	9,564
C	ENGINEERED VEGETATIVE FILTER STRIPS	DA-3		2,293
D	ADS BAYFILTER	DA-4		1,338
TOTAL				19,135

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE POLLUTION ABATEMENT SIZING AND TREATMENT REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL. THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF POLLUTION ABATEMENT ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENTS PLAN.

\\32520\cadd\4\22201\489\plan\p0000.dwg (11/02/2011 11:01:00 AM) User: jason\jason\jason
10/18/2011 10:02:27 PM

ORIGINAL SHEET - ARCH-E1



THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE POLLUTION ABATEMENT SIZING AND TREATMENT REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL. THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF POLLUTION ABATEMENT ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENTS PLANS.

Client/Project
#48 ACRE SONOMA VERDE MULTI FAMILY TRACT

Project No.: 222011489
Scale: AS SHOWN
Dwn. Dgn. Chkd. YYYY.MM.DD
Title

PERMANENT POLLUTION
ABATEMENT BASIN DETAILS

Revision: Sheet: of
Drawing No.

Exhibit 2

Consultant

Revision
By
Date
Issued

Permit/Seal
08/07/19
RYAN M. WHITTLE
125857
REGISTERED PROFESSIONAL ENGINEER
Ryan Whittle

Stantec
Stantec Consulting Services Inc.
701 NE Loop 410 Suite 1100
Dallas, Texas 75242
Tel: (214) 652-5699
www.stantec.com
TBP# F-4324
TBP# 1019420

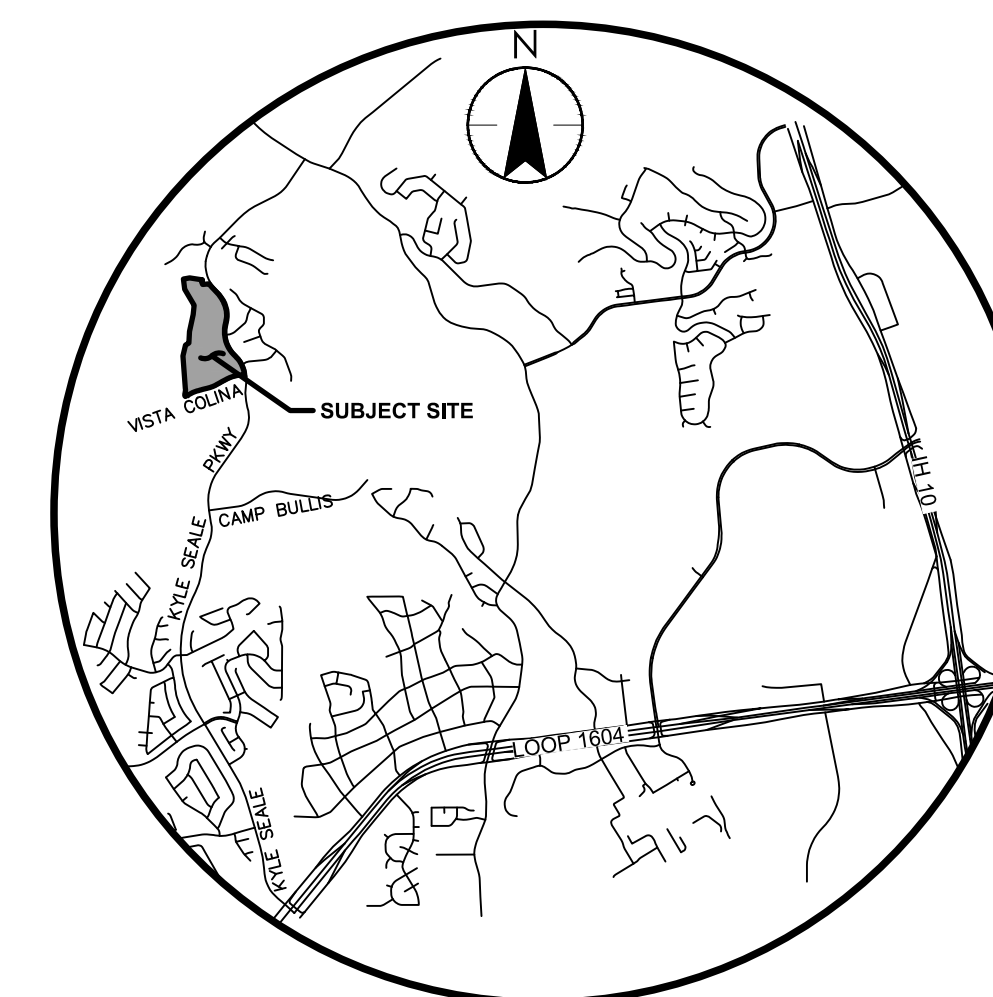
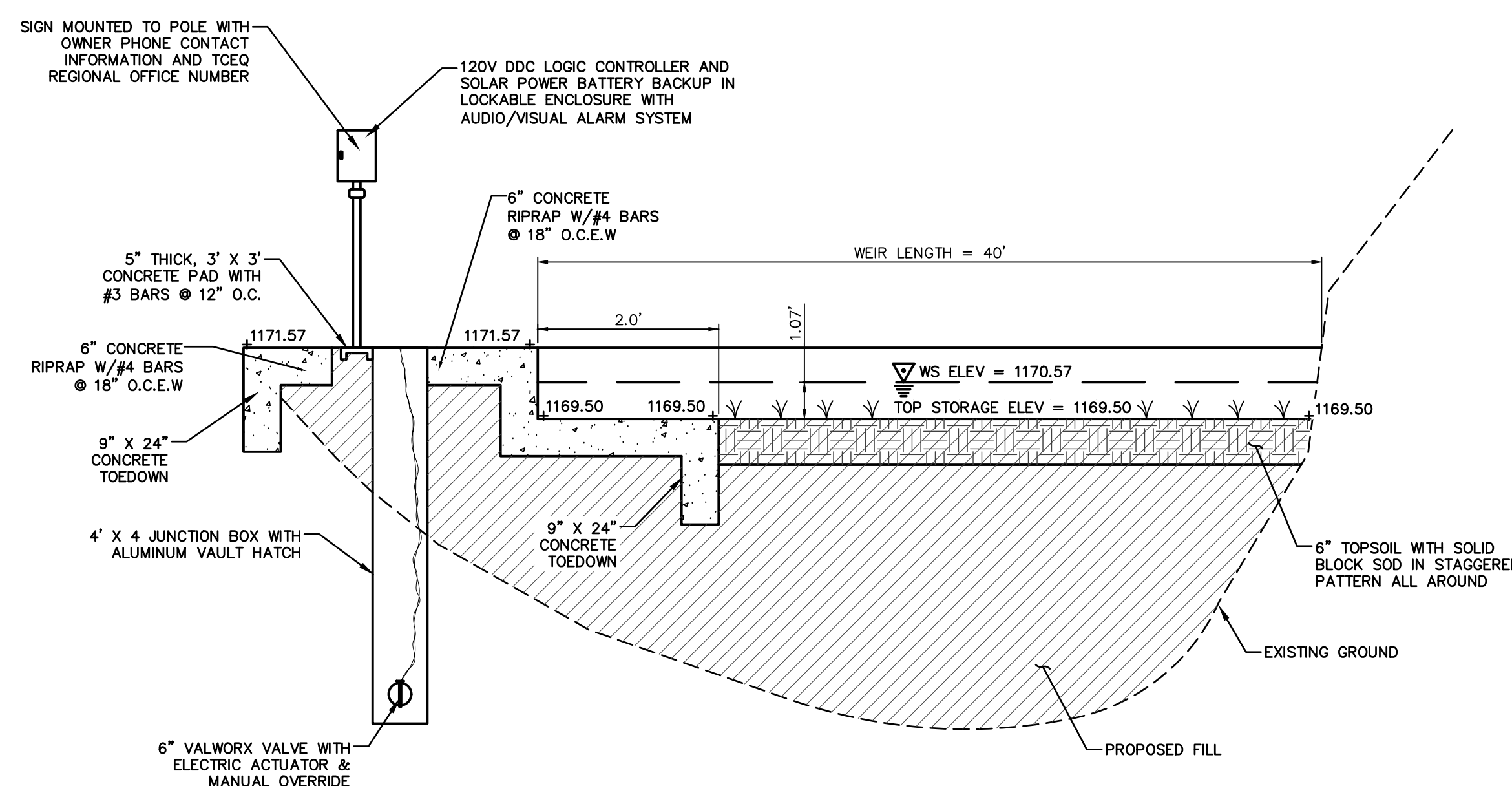
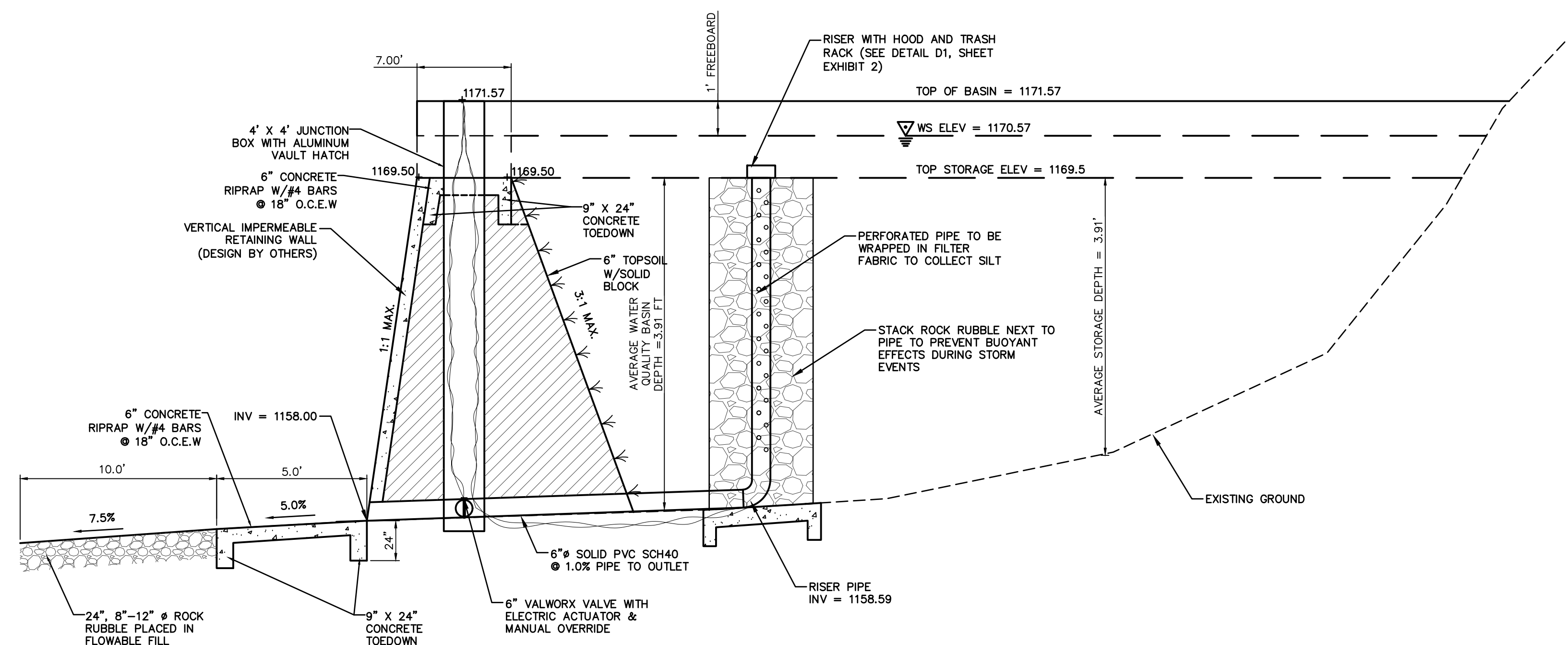
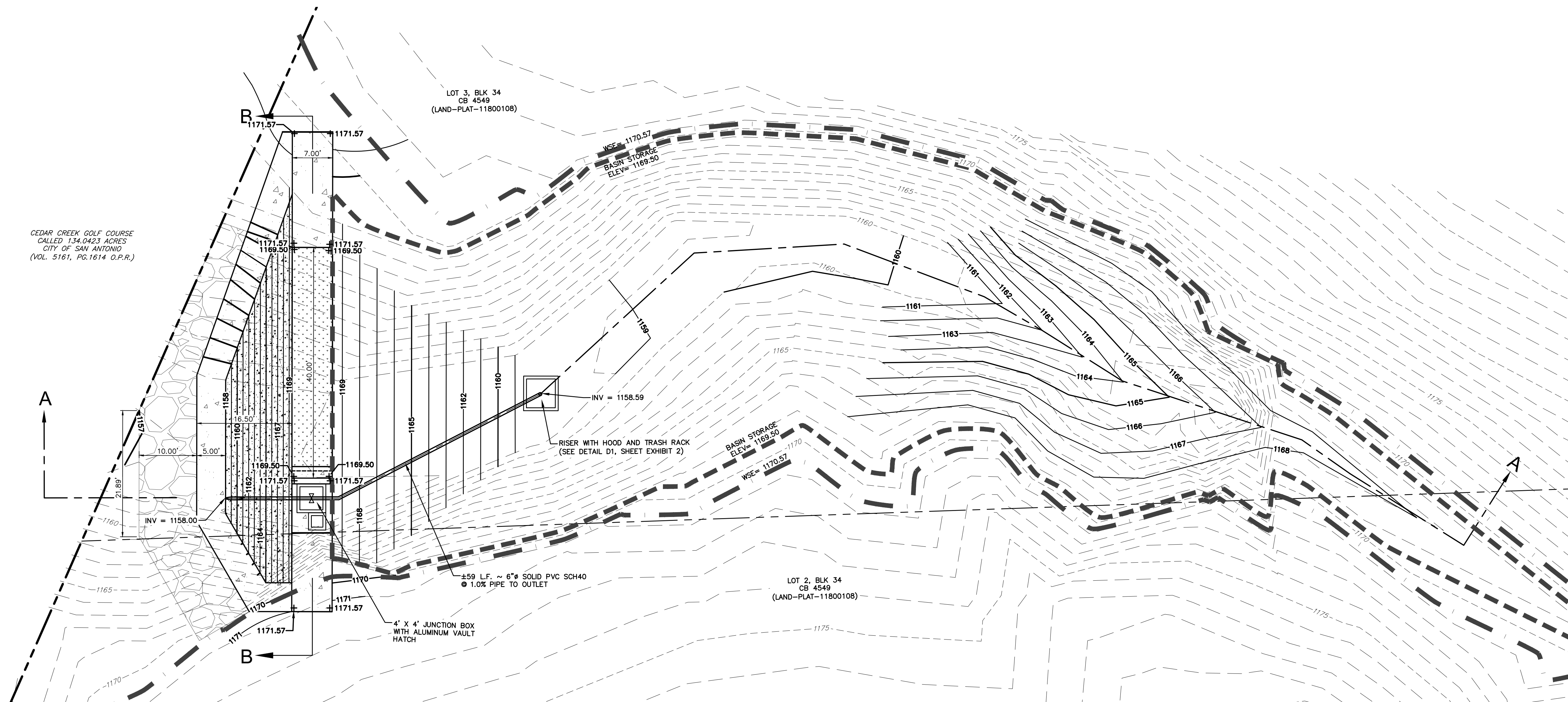


D

C

B

A



BASIN NOTES:

1. CONTRACTOR TO CONSTRUCT BASINS IN ACCORDANCE WITH CONSTRUCTION PLANS FOR PERMANENT SEDIMENTATION/FILTRATION WITH THE EXCEPTION OF THE GRAVEL DRAIN LAYER AND SAND FILTER LAYERS.
2. INSTALL PERMANENT STAKE TO INDICATE SEDIMENT LEVEL IN THE BASIN. STAKE SHOULD BE MARKED TO INDICATE WHEN SEDIMENT OCCUPIES 50% OF THE VOLUME OF THE BASIN.
3. SEDIMENT WILL BE REMOVED WHEN MORE THAN 50% OF THE BASIN CAPACITY IS EXCEEDED.
4. CONTRACTOR MAY USE SEED IMPREGNATED STRAW MATTING FOR SLOPE STABILIZATION. MATTING MATERIAL TO BE APPROVED BY ENGINEER.
5. CONTRACTOR TO SECURE PIPE TO BOTTOM OF BASIN TO PREVENT BUOYANCY DURING A RAIN EVENT. A CONCRETE ANCHOR MAY BE USED.
6. DISCHARGE PIPE TO BE INSTALLED AS TO BE IN PLACE FOR PERMANENT STRUCTURE.

SEQUENCE OF OPERATION

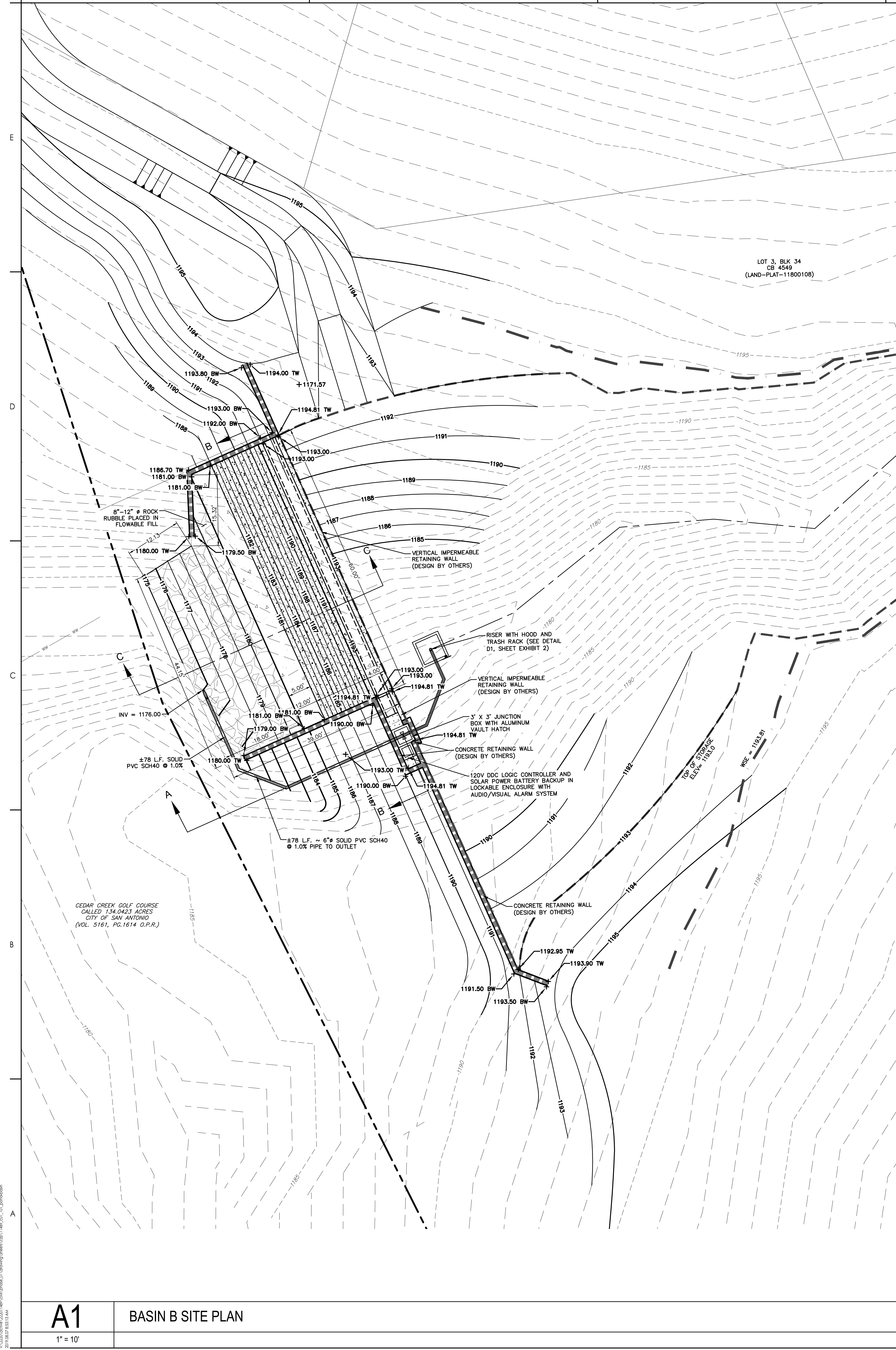
1. UPON ACTIVATION OF FLOAT SWITCH, DDC CONTROLLER TO START DETENTION TIMER #1.
2. DETENTION TIMER #1 TO BE MANUALLY SET TO 12 HOURS AHS TO BE USER ADJUSTABLE VALUE.
3. WHEN DETENTION TIMER #1 HAS ELAPSED, A 6" BUTTERFLY VALVE IS TO OPEN AND RELEASE DETAINED WATER BASIN.
4. UPON DEACTIVATION OF FLOAT SWITCH, DDC CONTROLLER TO START DETENTION TIMER #2.
5. DETENTION TIMER #2 TO BE MANUALLY SET TO 26 HOURS AND TO BE USER ADJUSTABLE.
6. WHEN DETENTION TIMER #2 HAS ELAPSED, THE 6" BUTTERFLY VALVE IS TO CLOSE.
7. VALVE TO BE ACTIVATED PERIODICALLY TO SHOW ACTIVE REGARDLESS OF FLOAT SWITCH OPERATION.

$$Q_{25} = (C_W) (L) (h^{3/2})$$

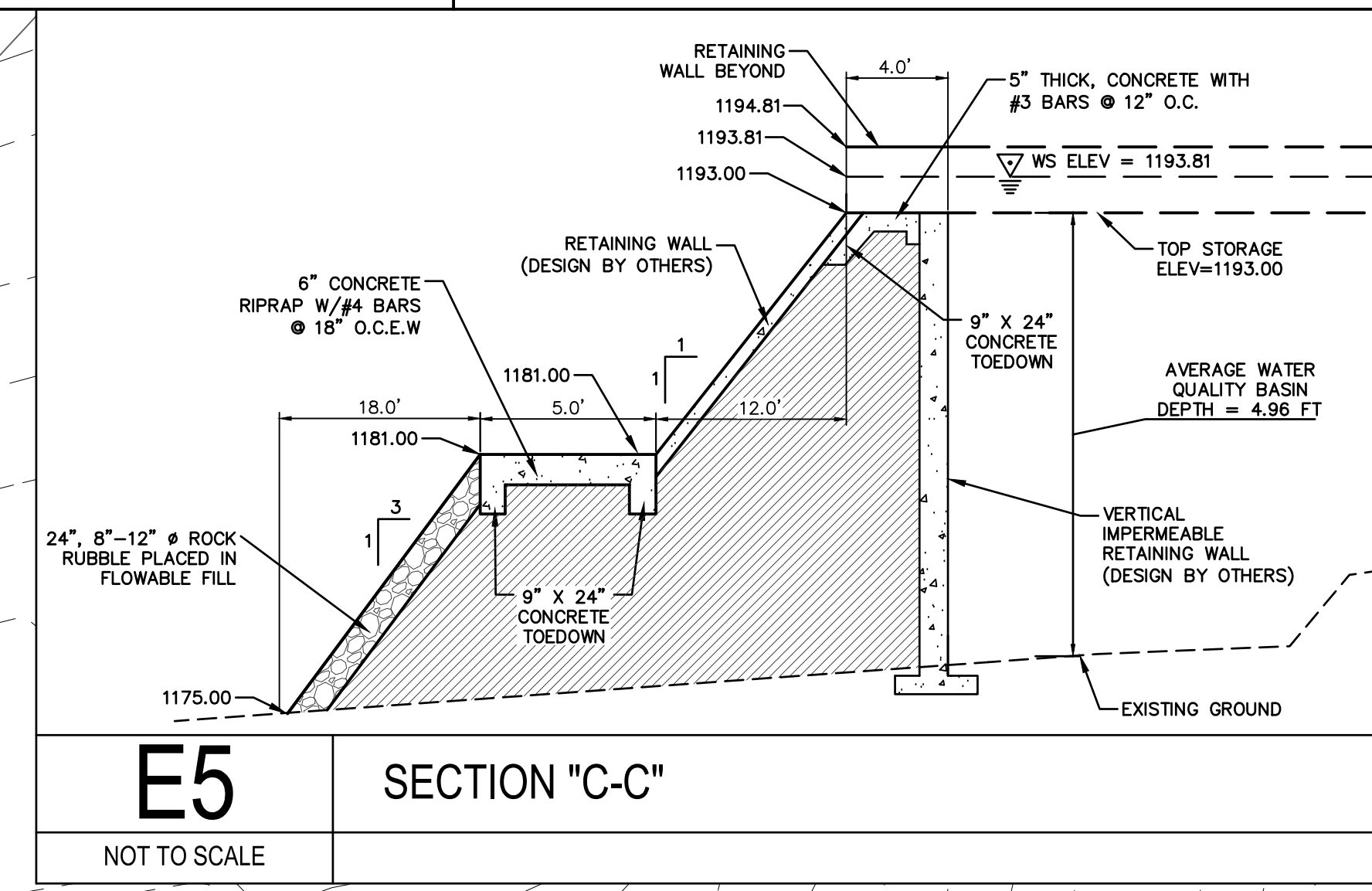
$Q_{25} = 137 \text{ cfs}$
 $L = 40 \text{ ft}$
 $h = 1.07 \text{ ft}$

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF POLLUTION ABATEMENT ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENTS PLANS.

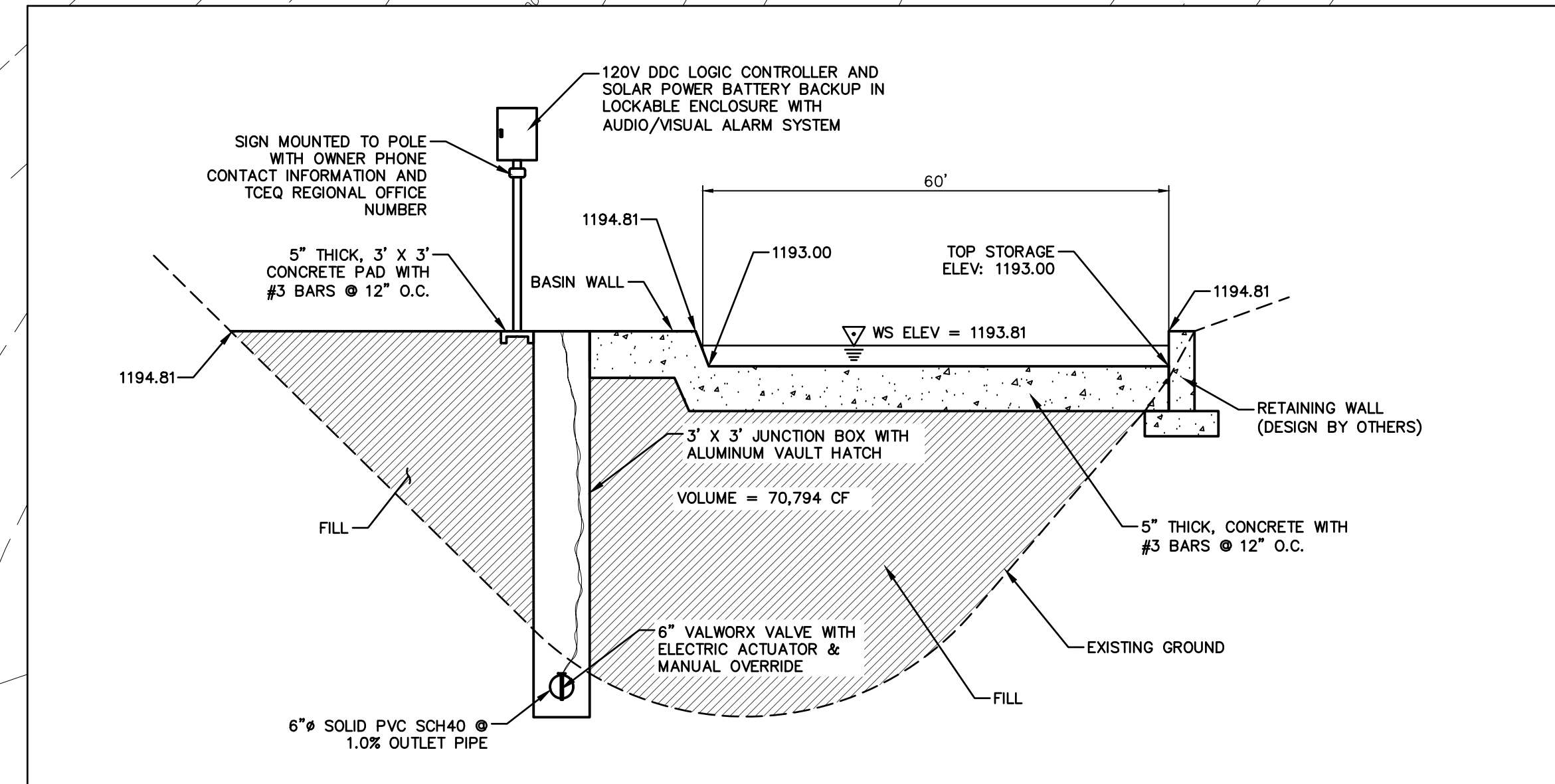
\\s3250\cadd\422011489\civil\cadd\511\working\sheet\A1.dwg, 05/11/2021, 10:11:44 AM, 10/11/2021, 10:11:44 AM



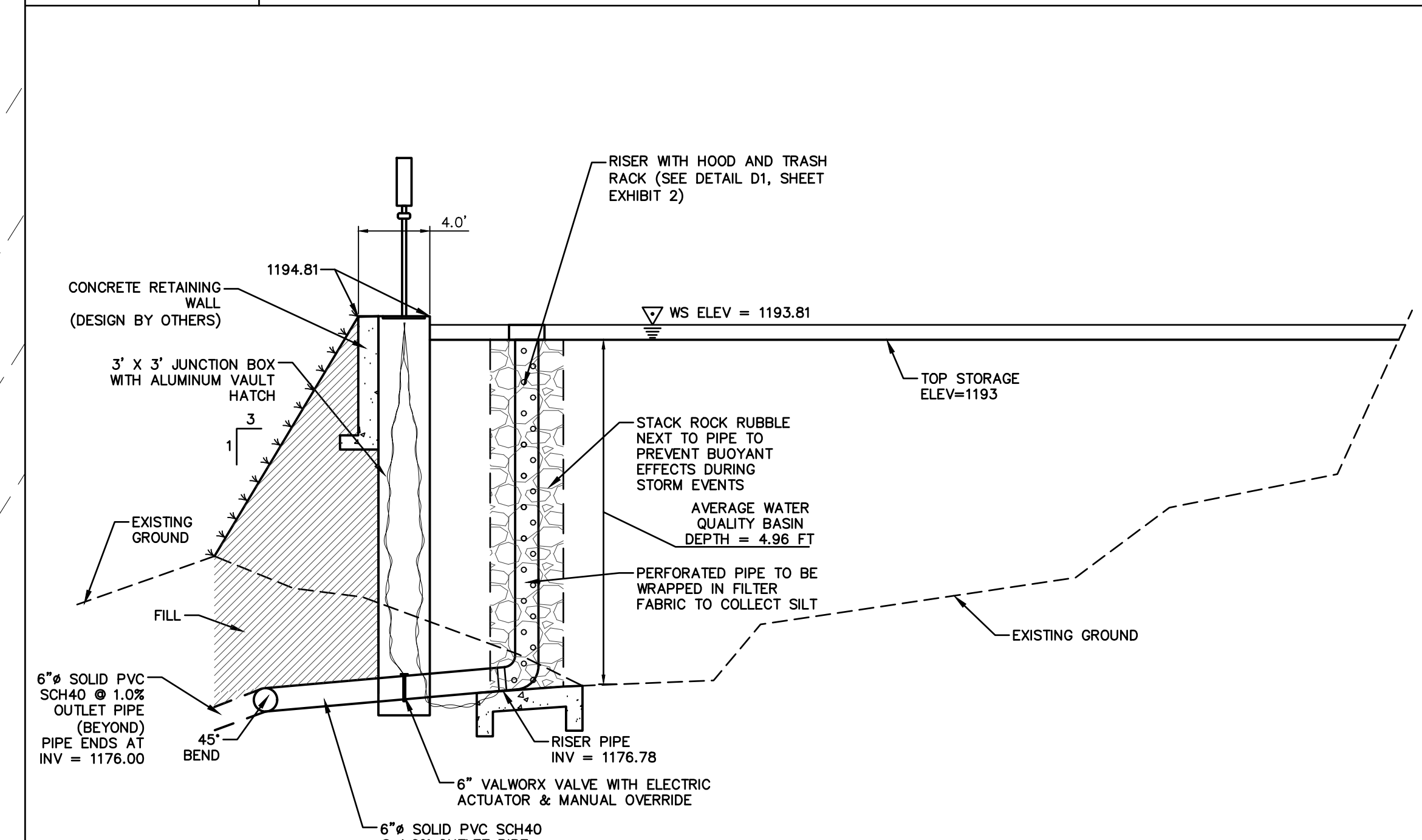
A1
1" = 10'
BASIN B SITE PLAN



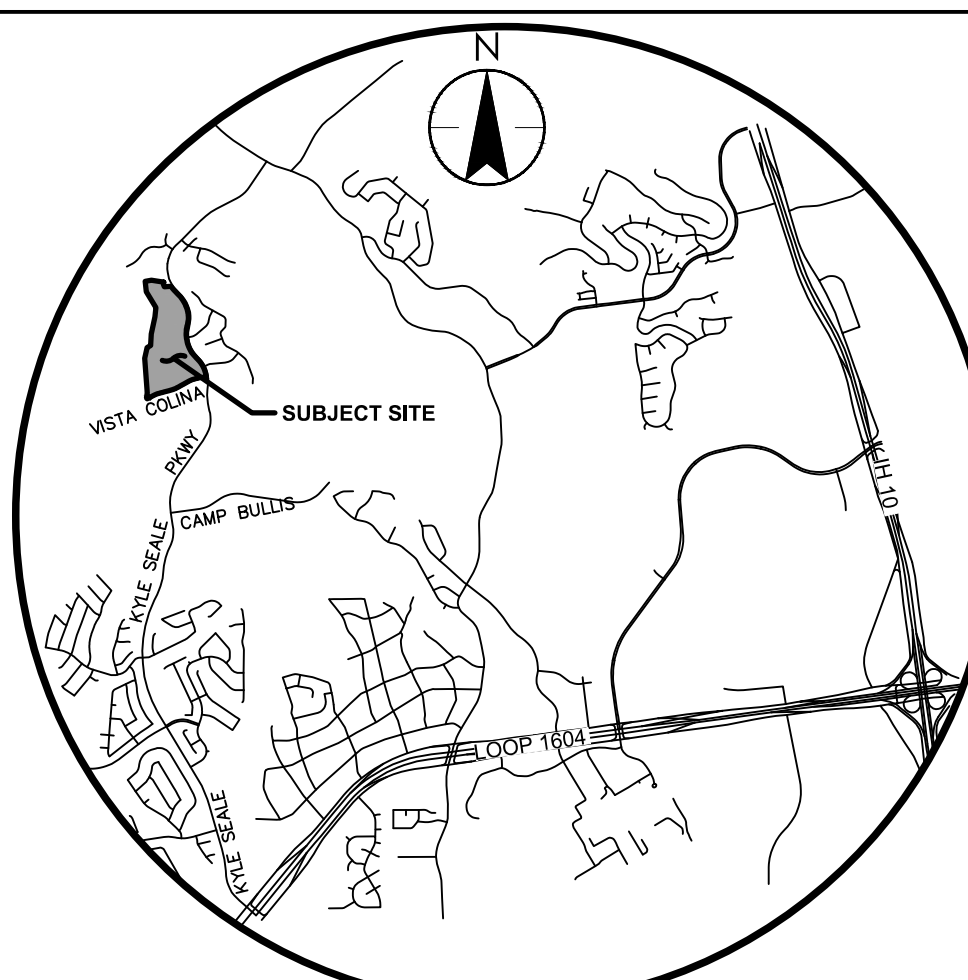
E5
NOT TO SCALE
SECTION "C-C"



B4
NOT TO SCALE
SECTION "B-B"



A4
NOT TO SCALE
SECTION "A-A"



VICINITY MAP
NOT TO SCALE
BEXAR COUNTY, TEXAS

- BASIN NOTES:**
1. CONTRACTOR TO CONSTRUCT BASINS IN ACCORDANCE WITH CONSTRUCTION PLANS FOR PERMANENT SEDIMENTATION/FILTRATION WITH THE EXCEPTION OF THE GRAVEL DRAIN LAYER AND SAND FILTER LAYERS.
 2. INSTALL PERMANENT STAKE TO INDICATE SEDIMENT LEVEL IN THE BASIN. STAKE SHOULD BE MARKED TO INDICATE WHEN SEDIMENT OCCUPIES 50% OF THE VOLUME OF THE BASIN.
 3. SEDIMENT WILL BE REMOVED WHEN MORE THAN 50% OF THE BASIN CAPACITY IS EXCEEDED.
 4. CONTRACTOR MAY USE SEED IMPREGNATED STRAW MATTING FOR SLOPE STABILIZATION. MATTING MATERIAL TO BE APPROVED BY ENGINEER.
 5. CONTRACTOR TO SECURE PIPE TO BOTTOM OF BASIN TO PREVENT BUOYANCY DURING A RAIN EVENT. A CONCRETE ANCHOR MAY BE USED.
 6. DISCHARGE PIPE TO BE INSTALLED SO AS TO BE IN PLACE FOR PERMANENT STRUCTURE.

- NOTES:**
1. UPON COMPLETION OF CONSTRUCTION AND IN ACCORDANCE WITH TCEQ REGULATIONS, ALL PERMANENT BMPs MUST BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER.
 2. ALL AREAS DISTURBED AS PART OF CONSTRUCTION SHALL BE REVEGETATED PRIOR TO COMPLETION.

- SEQUENCE OF OPERATION**
1. UPON ACTIVATION OF FLOAT SWITCH, DDC CONTROLLER TO START DETENTION TIMER #1.
 2. DETENTION TIMER #1 TO BE MANUALLY SET TO 12 HOURS AHS TO BE USER ADJUSTABLE VALUE.
 3. WHEN DETENTION TIMER #1 HAS ELAPSED, A 6" BUTTERFLY VALVE IS TO OPEN AND RELEASE DETAINED WATER BASIN.
 4. UPON DEACTIVATION OF FLOAT SWITCH, DDC CONTROLLER TO START DETENTION TIMER #2.
 5. DETENTION TIMER #2 TO BE MANUALLY SET TO 26 HOURS AND TO BE USER ADJUSTABLE.
 6. WHEN DETENTION TIMER #2 HAS ELAPSED, THE 6" BUTTERFLY VALVE IS TO CLOSE.
 7. VALVE TO BE ACTUATED PERIODICALLY TO SHOW ACTIVE REGARDLESS OF FLOAT SWITCH OPERATION.

- LEGEND**
- - - 1160 - - - EXISTING CONTOUR
 - 1160 ——— PROPOSED CONTOUR

OVERFLOW WEIR CALCULATIONS:

$$Q_{ws} = (C_w) (L) (h^{3/2})$$

$C_w = 3.087$
 $Q_{ws} = 135 \text{ cfs}$
 $L = 60 \text{ ft}$
 $h = 0.81 \text{ ft}$

BASIN CALCULATIONS:

BASIN WATERSHED	= 765,274 sf (20.54 ac)
RUNOFF DEPTH	= 2 in
REQUIRED CAPTURE VOLUME	= 61,649 cf
AVERAGE BASIN WATER STORAGE DEPTH	= 4.96 ft
DESIGNED BASIN CAPTURE VOLUME	= 70,794 cf

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE POLLUTION ABATEMENT SIZING AND TREATMENT REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF POLLUTION ABATEMENT ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENTS PLANS.

Stantec Consulting Services, Inc.
70 NE Loop 410 Suite 1100
Houston, Texas 77062-6593
Tel: (713) 625-8999
www.stantec.com

Stantec Consulting Services, Inc.
70 NE Loop 410 Suite 1100
Houston, Texas 77062-6593
Tel: (713) 625-8999
www.stantec.com

Consultant

Revision	By	Date
1	AY	05/11/2021

Permit/Seal

Client/Project

±48 ACRE SONOMA VERDE MULTI FAMILY TRACT

Project No.: 222011489

Scale: AS SHOWN

Drawn	Design	Checked	YYYYMMDD

Title

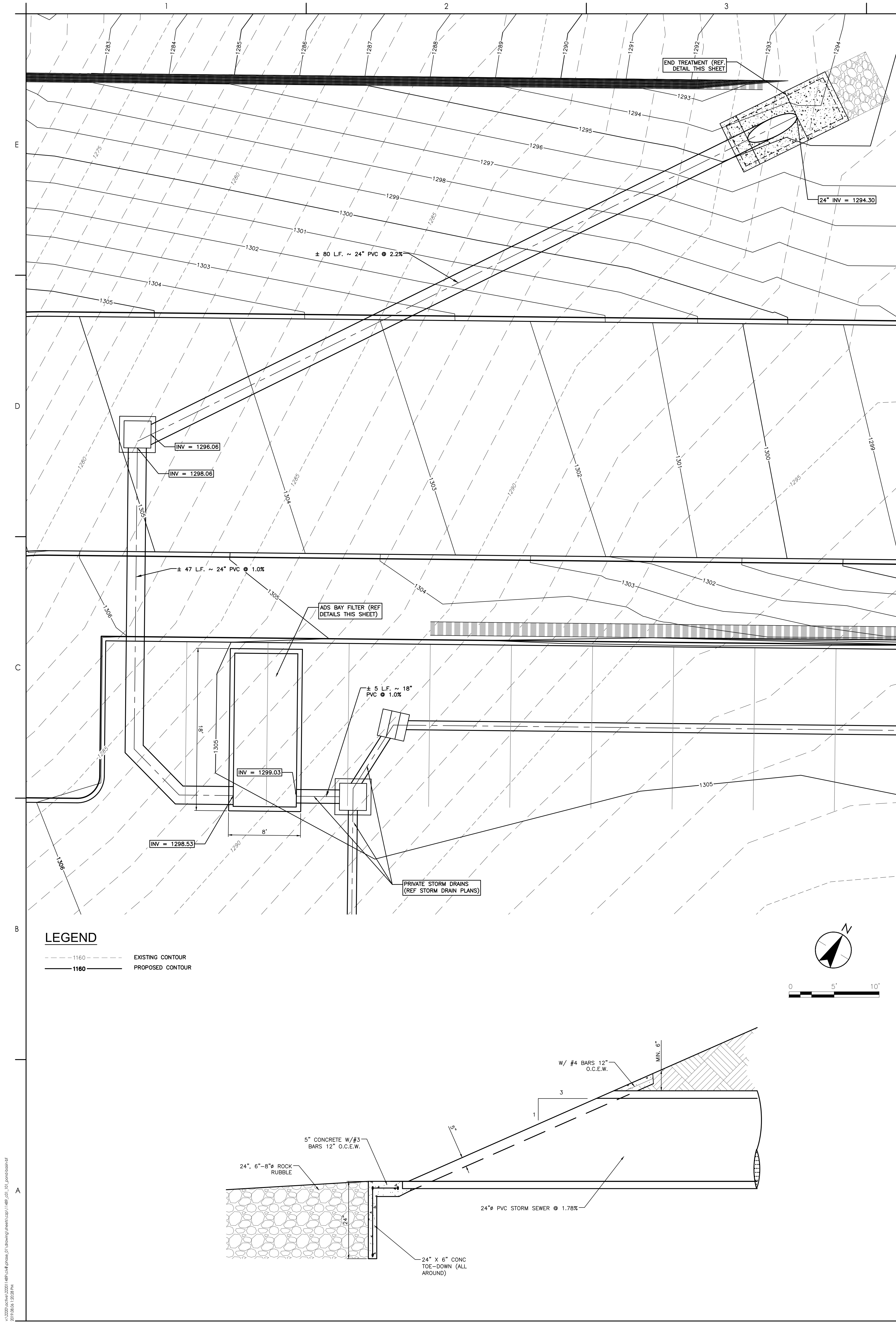
PERMANENT POLLUTION ABATEMENT PLAN - BASIN B

Revision:

Sheet:

of

Exhibit 4





— 4 —

STORAGE=DA x 3600 = XXXXXX CF

1. PRIOR TO CONSTRUCTION, MAKE CERTAIN THE NOTICE OF INTENT (NOI) OR PERMIT APPLICATION HAS BEEN REVIEWED AND APPROVED BY THE LOCAL PUBLIC WORKING AND THE TIDES REPORT AND SWPPP ARE AVAILABLE AT THE TRAILER.
2. INSTALL STORM WATER POLLUTION PREVENTION CONTROLS PRIOR TO ANY SITE PREPARATION OR CONSTRUCTION ACTIVITIES.
3. THE PLACEMENT OF STORM WATER POLLUTION PREVENTION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED STORM WATER POLLUTION PREVENTION CONTROL PLAN.
4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR AND ENGINEER AFTER INSTALLATION OF THE STORM WATER POLLUTION PREVENTION CONTROLS.
5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THE THOSE SHOWN ON THE APPROVED PLAN SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. APPROPRIATE MINOR CHANGES TO BE MADE FIELD REVIEW ON THE STORM WATER POLLUTION PREVENTION CONTROL PLAN MAY BE MADE BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL MAINTAIN THE CORRECT CONTROL INADEQUACIES IN ALL CASES THE CONTRACTOR SHALL REDLINE THE PLAN TO SHOW THE CHANGES TO THE CORRECT CONTROL.
7. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT INTERVALS OF AT LEAST ONCE EVERY TWO (2) WEEKS AND IMMEDIATELY AFTER ANY MAJOR WEATHER EVENT TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SUCH REPAIRS SHALL BE COMPLETED WITHIN 48 HOURS OF THE TIME THE DAMAGE REACHES SIX (6) INCHES.
8. UPON FINAL ACCEPTANCE BY THE CITY, HAUL ROADS, AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF PROPERLY.
9. ANY EROSION CONTROL CANNOT BE PROPERLY INSTALLABLE, TRIANGULAR FILLATION DIKE OR HAY BALE.
10. SOIL DISTURBANCES SHALL BE MINIMIZED BY EXPOSING ONLY THE SMALLEST NECESSARY AREA AND RESTORATION SHALL BE COMPLETED IMMEDIATELY AND FOR THE CONSTRUCTION ACTIVITY, FOR THE SHORTEST PRACTICAL PERIOD OF TIME.
11. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE EROSION IS OCCURRING. STABILIZATION MEASURES SHALL BE CEASED, AND EXCEPT AS PROVIDED BELOW, WILL BE INITIATED NO MORE THAN 14 DAYS AFTER THE OCCURRENCE OF EROSION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
12. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, STABILIZATION MEASURES SHALL BE INITIATED WITHIN ONE (1) TO TWO (2) DAYS. TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE.
13. WHERE CONSTRUCTION SITE WILL EXIT THROUGH A STABILIZED CONSTRUCTION EXIT AS LOCATED ON THE PLANS, WHEN SOILS HAVE COLLECTED ON THE EXISTING EXITS, THESE ARE TO BE REMOVED AND THE EXITS TO BE EFFECTIVENESS, THE SURFACE WILL BE CLEANED AND REESTABLISHED FOR THE INTENDED PURPOSE.
14. MULTIPLE EROSION CANNOT BE PREVENTED ON-SITE AND ONTO PUBLIC STREETS SHALL BE REMOVED IMMEDIATELY.
15. PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NEARLY AS POSSIBLE:
 - (A) A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROADS) AND BETWEEN THE CURB AND RIGHT-OF-WAY LINE.
 - (B) BEFORE REVEGETATION, THE EXISTING SOILS SHALL BE SOIL TEST PERFORMED. THE RESULTS MUST INCLUDE: ORGANIC MATTER, SOIL TEXTURE, ANALYSIS OF PH.

SAR, CE, AND CEC. SOIL TEST SHALL MAKE RECOMMENDATIONS TO ADDRESS ALL DEFICIENCIES. PROFILE P33 SOIL TESTING LABORATORY IS AN APPROVED LAB.

(1) TOPSOIL IS REQUIRED TO BE 100% VERMONT ORIGIN. 3% MAXIMUM FILLER.

I. IF SOIL TEST INDICATES 300-30X3, PROGNOSTICS BIOTIC SOIL MEDIA IS APPROVED FOR APPLICATION AT RATES RECOMMENDED PER SOIL TEST. PROGNOSTICS BSM IS APPROVED FOR APPLICATION AT RATES RECOMMENDED PER SOIL TEST.

PH SHALL BE MODIFIED AS PER SOIL TEST. NUTRIALME DRY AND AQUAPHAX ARE APPROVED SOIL PH MODIFIERS

(2) HIGH PH CHALK SHALL BE MODIFIED AS PER SOIL TEST. SODIUMPHIX IS AN APPROVED SOIL MODIFIER

(C) PERMANENT SEEDING

1. FROM SEPTEMBER 1 TO SEPTEMBER 1 SEEDING SHALL BE DONE WITH 2#/1000FT² UNMULLED VERMONTA 95/95 AND ANNUAL RYE 95/90 AT A RATE OF 3#/1000FT²

2. FROM MARCH 2 TO SEPTEMBER 14 SEEDING SHALL BE DONE WITH 2#/1000FT² OF

3. ON AREAS WITH A 4:1 SLOPE OR LESS, SEED MAY BE BROADCAST OR PULVED OUT WITH A WOOD/BLENDED HYDROMULCH. MINIMUM RATE FOR MULCH FIBER WILL BE 100#/1000FT² OF WOOD/BLENDED HYDROMULCH FIBER AT A RATE OF 2000#/AC. BLOWN STRAW OR HAY WILL NOT BE ACCEPTED.

4. ON AREAS WITH A 4:1 SLOPE OR GREATER, SEED WILL BE APPLIED WITH A HYDRAULICALLY APPLIED EROSION CONTROL PRODUCT. FLEXTERA-HP IS ACCEPTED FOR APPLICATION. FLEXTERA-HP WILL BE CARRIED WITH A LAYER OF WOOD/BLENDED HYDROMULCH FIBER. THE MINIMUM AMOUNT OF MATERIAL BASED ON SLOPE ANGLE AND LENGTH. THE MINIMUM AMOUNT OF MATERIAL ACCEPTED WILL BE 3000#/AC. SEED MAY ALSO BE BROADCAST AND CAPPED WITH AN APPLICATION OF FLEXTERA-HP.

(D) FERTILIZER

1. OPTIMUM 1: 15-15-15 GRANULAR FERTILIZER SHALL BE APPLIED AT A RATE OF 100#/AC. FERTILIZER MAY BE BROADCAST OR APPLIED IN HYDROMULCH SLURRY.

2. OPTIMUM 2: 15-15-15 WATER SOLUBLE FERTILIZER MAY BE APPLIED AT 100#/AC.

(E) THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TORSOL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF 12 INCHES. THE IRRIGATION SHALL BE SCHEDULED TO OCCUR IMMEDIATELY AFTER THE FIRST TWO MONTHS RAINFALL OCCURRENCES OF 1/2 INCH OR MORE SHALL POSTPONE. THE WATERING SCHEDULE FOR ONE WEEK. (COORDINATE WITH IRRIGATION FIRM)

(F) RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1 1/2 INCHES HIGH WITH 95% COVERAGE, PROVIDED NO SPOTS LARGER THAN 16 INCHES ARE LEFT UNCOVERED.

(G) SEEDING SHALL BE APPLIED TO ALL AREAS WITH DISTURBED PROJECT AREA NOT COVERED BY PAVEMENT, BUILDING PAD OR PROJECT LANDSCAPING PLANS, INCLUDING THE FOLLOWING:

(1) AT LEAST TWO SEEDINGS SHALL OCCUR DURING PROJECT. THEY SHOULD OCCUR WITHIN 14 DAYS AFTER PONDS ARE GRADED AND PRIOR TO FINAL PUNCH LIST.

15. DRAINAGE BASIN: A DRAINAGE BASIN SHALL BE INSTALLED IN ANY DRAINAGE LOCATION WHERE MORE THAN 10 ACRES IN THE UPSTREAM DRAINAGE ARE DISTURBED AT ONE TIME. THE SEDIMENT BASIN SHALL BE DESIGNED TO STORE 10% OF THE VOLUME OF STORAGE FOR EVERY ACRE OF LAND, WHICH IT DRAINS.

16. CONTRACTOR'S FILING OF NOTICE OF TERMINATION (NOT) SHALL OCCUR UPON HE'S ACCEPTANCE OF REVEGETATION.

- FURNISH AND INSTALL TEMPORARY AND PERMANENT STORM WATER POLLUTION PREVENTION CONTROL MEASURES SHOWN IN THE CONSTRUCTION MOVEMENTS IN COMPLIANCE WITH THE EROSION CONTROL PLAN, CONTROL MEASURES, TYPES OF MATS, OR OTHER WATERWAY DEVELOPMENT PERMITS. EXECUTION:
10. PROVIDE SUFFICIENT POLLUTION PREVENTION MEASURES SHOWN IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
11. SUBMIT A STORM WATER TYPICAL GENERAL PERMIT NOTICE OF INTENT (NOI) AT LEAST TWO MONTHS PRIOR TO START OF CONSTRUCTION WORK AND KEEP A COPY OF THE SWPPP.
12. POST SIGNAGE AND COMPLETED NO POSTING NOTICE ON CONSTRUCTION SITE NOTICE (CSN) AT THE PROJECT START OF CONSTRUCTION WORK AND KEEP A COPY OF THE SWPPP.
13. MAINTAIN AND REINSTATE POLLUTION CONTROL MEASURES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND WITH PROJECT SPECIFICATIONS.
14. INSTALL EROSION CONTROL MEASURES AND CONSTRUCTION ENTRANCES AS SHOWN IN THE SWPPP. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE PROJECT AND BE REPAIRED, RESTABILIZED, ADJUSTED OR REINSTALLED WITH EACH SUBSEQUENT PHASE OF CONSTRUCTION.
15. CONTRACTOR IS RESPONSIBLE FOR ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE, AND SHALL REMOVE THE ACCUMULATION OF OFF-SITE SEDIMENT PROMPTLY.
16. WHENEVER SEDIMENT FROM THE CONSTRUCTION SITE IS OBSERVED OFF-SITE, THE CONTRACTOR SHALL IMMEDIATELY TAKE ACTION TO STOP THE CAUSE OF THE SEDIMENTATION.
17. OFF-SITE MATERIAL STORAGE AREAS USED SOLELY BY THE PROJECT ARE NOT CONSIDERED PART OF THE PROJECT.
18. MAINTAIN RECORDS OF PROJECT MILESTONE DATES AND FIELD CHANGES AS REQUIRED BY THE SWPPP.
19. INSPECT POLLUTION CONTROL MEASURES EVERY 14 DAYS AND WITHIN 24 HOURS AFTER A RAIN EVENT OR GREAT EXCESSIVE UNEXPECTED DISPERSED RAINFALL SHOULD BE RECORDED AS REQUIRED BY THE SWPPP.
20. DEFICIENCIES NOTED DURING THE INSPECTION WILL BE CORRECTED AND DOCUMENTED WITHIN 14 DAYS OF THE DATE OF THE INSPECTION.
21. IF THE CONTRACTOR INTENDS TO HAVE FUEL TANKS STORED ON THE PROJECT SITE AT ANY TIME, THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE DISTRICT ENGINEER FOR POLLUTION PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) "COPY OF THEIR PLAN MEETING THE REQUIREMENTS OF TITLE 40, CODE OF FEDERAL REGULATION REGULATIONS, PART 112 AS WELL AS THE USE OF THE SPCC PLAN." (See Attachment 1)

